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Arkansas Cotton Variety Test 2007

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ARKANSAS COTTON VARIETY TEST 2007



*F.M. Bourland, A.B. Beach,
J.M. Hornbeck, and A.J. Hood*

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SUMMARY

The primary goal of the Arkansas Cotton Variety Test is to provide unbiased data regarding the agronomic performance of cotton varieties and advanced breeding lines in the major cotton-growing areas of Arkansas. This information helps seed companies establish marketing strategies and assists producers in choosing varieties to plant. These annual evaluations will then facilitate the inclusion of new, improved genetic material in Arkansas cotton production. Adaptation of varieties is determined by evaluating the lines at four University of Arkansas research sites (near Keiser, Judd Hill, Marianna, and Rohwer). The 2007 Arkansas Cotton Variety Test was separated into two 38-entry experiments, one for entries that were evaluated in both 2006 and 2007 and one for 1st year entries. Three common check varieties were included in both experiments. Reported data include yield, lint percentage, plant height, open bolls, yield component variables, fiber properties, leaf pubescence, stem pubescence, and bract trichome density. Entries in both experiments were evaluated for response to tarnished plant bug in a separate test at Keiser.

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Arkansas Cotton Variety Test 2007

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J.M. Hornbeck, and A.J. Hood¹*

Introduction

The purpose of the University of Arkansas Cotton Variety Testing Program is to provide unbiased comparisons of cotton varieties and advanced breeding lines over a range of environments. Data from these tests help to identify the potential adaptability of varieties to particular cotton growing regions of the state. Bourland et al. (2000) documented several unintentional biases, which are inherent to the Arkansas cotton variety testing program. These include management associated with varieties expressing herbicide and insect resistance. The biases tend to cancel each other so that no great advantage is given to any particular variety. Since evaluation of genetic differences among entries is the ultimate goal of the evaluations, all varieties are treated identically within a location. No specialized production inputs were implemented with respect to genetically enhanced varieties. Round-up Ready® (RR) varieties, Round-up Ready Flex® (RF), Liberty Link® (LL) varieties, BollGard® (BG and B2) varieties, Widestrike® (W) varieties and conventional varieties were all treated equally with respect to weed and insect control.

Cotton varieties that were evaluated in the 2006 Arkansas Cotton Variety Test and were re-submitted in 2007 were entered in the 2007 main experiment. Lines that were not evaluated in the 2006 test were entered

into the 2007 1st year variety test. Common check varieties were included in both experiments.

Materials and Methods

Each of the 2007 experiments (both main and 1st year experiments) included 38 entries (Table 1). The 2007 main experiment consisted of 37 varieties and a red leaf marker entry (experimental line designated as TX-Maroon). The 37 varieties included 23 Round-up Ready Flex® varieties (15 B2RF, 7 RF, and 1 WRF) and 14 non-Round-up Ready Flex® varieties (6 BR, 2 WR, 2 RR, 2 LL, 1 B2LL and 1 conventional). The 1st year experiment included 35 entries plus three check varieties. The 35 entries included 34 Round-up Ready Flex® varieties (21 B2RF, 7, WRF, and 6 RF) and one non-Round-up Ready Flex® variety (1 B2LL). Check varieties were chosen at the discretion of the project leader. All test sites included the same entries. Replications of the two experiments were randomized within each field.

Test sites included the Northeast Research and Extension Center at Keiser; the Judd Hill Cooperative Research Site at Judd Hill (near Trumann); the Lon Mann Cotton Research Station at Marianna; and the Southeast Branch Experiment Station at Rohwer. Cultural practices and weather data (heat units and rainfall) associated with the test sites are listed in Table 2 and Table 3, respectively.

¹F.M. Bourland is center director and professor and A.B. Beach is a program technician at the Northeast Research and Extension Center; J.M. Hornbeck is a program technician at the Lon Mann Cotton Research Station; A.J. Hood is a program technician at the Southeast Branch Experiment Station.

Double treated (two fungicides) seed for all entries were obtained from originators. Prior to planting, all seed were treated with imidacloprid (Gaucho®) at a rate of 6 oz./100 lb. seed. Plots were planted with a constant number of seed (about 4 seed/row ft.). All varieties were planted in two-row plots on 38-inch centers and ranged from 40 to 50 feet in length. Experiments were arranged in a randomized complete block and replicated four times. Although exact inputs varied across locations, cultural inputs at each location were generally based on University of Arkansas Cooperative Extension Service recommendations for cotton production, including COTMAN rules for insecticide termination. All plots were machine-harvested with 2-row cotton pickers modified with load cells for harvesting small plots.

Data Collected

Data Collected at Single Location:

Leaf Pubescence: Leaf pubescence was visually rated on a scale of 1 (smooth leaf) to 9 (pilose, very hairy) in the irrigated experiments at Keiser using the system described by Bourland et al. (2003). A full-sized leaf, about 5-6 nodes from plant apex, was rated for 6 plants per plot for all 4 replications during August.

Stem Pubescence: Stem pubescence was visually rated on a scale of 1 (smooth stem) to 9 (very hairy) in the irrigated experiments at Keiser using a system similar to that used for leaves. After harvest, the upper 5-6 inches of the plant apex, was rated for 6 plants per plot for all 4 replications.

Bract variables: After cutout, a bract from a mid-plant, 1st position boll was randomly sampled from six plants/plot (4 replications) in the Keiser experiments after cutout. Each bract was examined for marginal trichome density (no. of trichome/cm.) as described by Bourland and Hornbeck (2007). Means for the six bracts were evaluated as plot means.

Tarnished plant bug (TPB): Entries in the three experiments were evaluated for response to TPB in a separate field at Keiser. Each experiment included 12 replications of 1-row plots (18 feet long on 38-inch wide rows). The

experiments were planted on May 11 and managed to encourage TPB infestations. An area of mustard beside the field and four rows of frego bract cotton between the experiments were planted approximately one month prior to planting the experiments. Response to TPB was determined by examining white flowers (6 flowers/plot/day for 9 days in late August) for presence of anther damage. Accumulate percentage of damaged flowers ("dirty blooms") was determined for each plot.

Data Collected at All Locations:

Plant Height: Plant height measurements (in cm.) were collected from each variety after defoliation. Average plant heights for varieties were determined by measuring from the soil surface to the terminal of one averaged sized plant in each of the two rows. Plot means (average of the two measurements) were evaluated. Plant height measurements were not made at the Rohwer site.

% Open bolls: Immediately before or after first application of defoliant, percentage of open bolls was estimated from the front and back of each plot (4 replications), then averaged for each plot.

Boll samples and lint percentage: Prior to mechanical harvest, hand-harvested samples of 50 open bolls were obtained from two replications at each location. The samples were obtained by picking all open bolls from consecutive plants. Within each row of two-row plots, a site having average or above plant density was chosen and 25 consecutive bolls were harvested and bulked to form a 50-boll sample. The 50-boll samples were ginned (lab gin without the use of lint cleaners) to determine lint fraction (the percentage of lint weight to seedcotton weight).

Fiber properties: Fiber samples were taken from each boll sample and were evaluated using HVI classification included micronaire (Mic.), fiber length (Len.), length uniformity index (Unif.), strength (Str.) and elongation (Elo.). To reflect fiber quality market demand, a weighted quality score (Q-score) was calculated. Parameters (and weighting) included in Q-score were fiber length (50%), micronaire (25%), length uniformity index (15%), and strength (10%).

Seed index: Two sets of 50 fuzzy seed from the ginned seed of each 50-boll sample were counted and weighed. If the two weights varied greatly, a third sample was taken. Two consistent weights of 50 seed were added to obtain fuzzy seed index (weight of 100 seed).

Seed per acre: For each plot, an estimate of number of seed per acre was determined by multiplying seedcotton yield (lb/a converted to g/a) times average seed percentage (the percentage of seed weight to seedcotton weight in ginned sample, averaged by entry and location over reps), then divided by average seed weight (average seed index by entry over reps divided by 100).

Lint index: Lint index (weight of lint on 100 seed) was determined from 50-boll sample data by dividing lint weight from ginned sample by the number of seed per sample (estimated using average seed weight) then multiplying by 100.

Fibers per seed: Fibers per seed were estimated by dividing lint index by an estimated weight of individual fibers. Weight of an individual fiber was estimated by: (fiber length x length uniformity x (micronaire/1,000,000)).

Lint Yield: Seedcotton yield per plot (determined by 2-row cotton picker) was converted to seedcotton yield per acre then multiplied by average lint percentage (determined by variety and location) to estimate lint per acre.

Yield Comparisons:

Uncontrolled variation is inherent to collection of variety performance data (particularly yield data). In addition to their genetic ability, variation among varieties may be due to slight differences in soil, pest or climatic conditions within a field, various interactions with specific management practices, or experimental error. Statistics allow users to define the degree of uncontrolled variation and to interpret data. The statistical tool used to compare means in these tests was Fisher's Protected Least Significant Difference (LSD). An LSD was calculated when the F value from ANOVA was sig-

nificant. Yields of varieties are considered significantly different if the difference between mean yields of two varieties is greater than the LSD value. Differences smaller than the LSD may have occurred by chance, or due to uncontrolled variation and are therefore considered not significant.

Additional estimates of variation are provided by measures of R squared and coefficient of variation (CV). R squared (times 100) indicates the percentage of variation that is explained by defined sources of variation (e.g. replication and variety effects within a location). Confidence in data increases as R squared increases. Generally, the meaningfulness of difference among means is questionable when data have R squared values of less than 50%. Also, confidence in data becomes greater as CV declines. Since CV is a function of the mean of a parameter, R squared is considered to be a better tool for comparing the precision of different experiments.

Results

Optimum planting conditions were experienced throughout the most of Arkansas during April and May of 2007. Wet conditions in south Arkansas delayed some plantings. After May, weather conditions varied greatly between northeast and southeast Arkansas (Table 3). Accumulative DD60s were near normal for May through July, but were higher than normal in August and September. Drought conditions occurred throughout the state in August, and persisted through much of September in central and south Arkansas. Rainfall in September hindered defoliation and harvest of tests at Keiser and Judd Hill. All tests were harvested prior to heavy rainfalls that occurred in mid- to late October. Generally, crop maturity was enhanced by an early initiation of flowering (about one week earlier than usual) followed by warmer than normal conditions in August and September. All locations except Rohwer produced higher than usual lint yields. Other observations associated with each test site include:

Keiser. Very good stand establishment and early growth were observed. Due to its clay soil, no growth regulators were applied.

Cultural Inputs and Production Information

Judd Hill. Very good stand establishment and early growth were observed. Due to equipment problems, applications of growth regulators were delayed. Verticillium wilt was not rated in 2007 due to low incidence of the disease.

Marianna. Excellent growth and very high yields were attained in 2007.

Rohwer. Wet field conditions delayed initial planting of this site until May 15. Due to a planter problem, undesired stands were obtained. Subsequently, the tests were replanted on May 23. In most years, yields at Rohwer exceed yields at other Arkansas test locations. However, the late planting reduced yields at Rohwer in 2007.

Entries and participants in the main and 1st year experiments are listed in Table 1. Cultural inputs and production information for variety trials at Keiser, Judd Hill, Marianna, and Rohwer are reported in Table 2. Table 3 reports weather information for north, central, and south Arkansas locations during the 2007 production season.

Performance of entries in the main experiment of 2007 Arkansas Cotton Variety Test, which includes varieties that were evaluated in both 2006 and 2007, are provided in Table 4 through 13. Two and three year yield means for entries in the main experiments are in Tables 14 and 15, respectively. Performance data for first- year entries, which were evaluated in 2007 but not evaluated in 2006, are in Tables 16-25. Morphological and host plant resistance measurements for entries are in Tables 26 and 27.

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Table 1. Participants and entries in the 2007 Arkansas Cotton Variety Test.

Institution/ Contact person	Main Test		1st year Test	
Americot / Chiree Lopez			AM 1504 B2RF AM 1532 B2RF AM 1622 B2RF AM 1664 B2RF AM 1550 B2RF	AMX 110118 B2RF AMX 511345 B2RF AMX 511353 B2RF AMX 511370 B2RF
Bayer Crop Science / Steve P. Nichols	FM 955 LLB2 FM 958 LL FM 1600 LL	FM 9060 F FM 9063 B2F FM 9068 F	FM 1735 LLB2 FM 1880 B2F FMX 4327 B2F	FMX 4330 B2F
Croplan Genetics / Jaime Yanes	CG 3020 B2RF CG 3520 B2RF	CG 4020B2F	CG 3220 B2RF CG 3035 RF	
Delta & Pine Land Company / Jim Bosch	DP 117 B2RF DP 143 B2RF DP 147 B2RF DP 164 B2RF DP 167 B2RF DP 393, ck.	DP 434 RR DP 445 BG/RR DP 454 BG/RR DP 455 BG/RR DP 515 BGII/RR	DP 121 RF DP 141 B2RF DP 161 B2RF DP 174 RF DP 117 B2RF, ck.	
Monanto / Andy White	ST 4357 B2RF ST 4427 B2RF ST 4554 B2RF ST 4664 RF	ST 5242 BR ST 5283 RF ST 5327 B2RF ST 5599 BR, ck.	ST 4498 B2RF ST 4596 B2RF ST 4678 B2RF ST 5458 B2RF	ST 6551 B2RF ST 5445 B2RF, ck.
PhytoGen Seed Co., LLC. / Bobby Haygood	PHY 310 R PHY 370 WR PHY 425 RF	PHY 480 WR PHY 485 WRF	PHY 315 RF PHY 375 WRF PHY 370 WRF, ck.	
PhytoGen Seed Co., LLC. / Mustafa McPherson			PHX3701 PHX3702 PHX3703	PHX3709 PHX4727 PHX4762
United Agri Products / Dyna-Gro / Larry Stauber	DG 2100 B2RF DG 2242 B2RF DG 2490 B2RF	DG 2520 B2RF	DG 2383 RF DG 2400 RF DG CT07550	

Table 2. Cultural practices for locations of the 2007 Arkansas Cotton Variety Test.

Input	Location			
	Keiser	Judd Hill	Marianna	Rohwer
Soil type	Sharkey silty clay	Dundee silt loam	Callaway silt loam	Desha silt loam
N, P, K	100,0,0	92,28,80	120,0,100	100,0,120
Planting date	4/30	5/9	5/3	5/23*
Irrigation method	Furrow	Furrow	Furrow	Furrow
Irrigation dates	6/4	6/8, 6/15, 6/29	6/7, 6/15, 6/29	
	7/10, 7/27	7/20, 7/27	7/21, 7/27	7/21
	8/6, 8/14	8/3, 8/9, 8/16	8/3, 8/16	8/4, 8/9, 8/17, 8/27
Defoliation date	8/29	9/17	9/18;9/27	9/19;9/28
Harvest date	9/18	10/4	10/9;10/10	10/8

* Due to planter problem, initial planting on 5/15 was replanted on 5/23.

Table 3. Weather summary for the 2007 production season in north, central and south Arkansas.

Location	Month	DD60's in 2007	Historical avg. DD60's ¹	Rainfall (in.) in 2007
Keiser (northeast)	May	449.5	309.6	1.65
	June	600.0	530.1	1.86
	July	604.5	645.4	2.16
	August	806.0	576	0.23
	September	480.0	361.5	7.62
	Total	2940.0	2422.6	13.52
Marianna (central)	May	418.5	2.65	2.65
	June	585.0	541.5	3.67
	July	589.0	648.8	6.04
	August	775.0	596.6	0.89
	September	480.0	393.1	2.98
	Total	2847.5	2516.2	16.23
Rohwer (southeast)	May	423.2	351.4	3.94
	June	585.0	550.6	5.20
	July	551.8	661.8	5.15
	August	756.4	612.4	0.25
	September	445.5	414.0	3.54
	Total	2761.9	2590.2	18.08

¹/DD60 (growing degree days based on 60F) from historical weather data, 1948-2005 for Marianna and 1960-2005 for Keiser and Rohwer.

Table 4. Yield and related properties - 2007 Main Cotton Variety Test across four Arkansas test sites.

Variety	Lint yield	r	Lint frac.	r	Ht.	r	Open bolls	r	Seed index	r	Lint index	r	Seed per a	r	Fibers/ seed	r	Fiber den.	r
	lb/a		%		cm		%		g		g		mil.		no.		no.	
PHY 370 WR	1473	1	42.4	5	113	7	68	14	10.1	17	7.7	6	8.730	17	17310	10	28.7	8
DP 454 BG/RR	1444	2	43.9	1	113	6	65	24	8.9	36	7.2	15	9.166	5	18165	3	34.5	1
DP 515 BG/RR	1435	3	43.3	2	110	12	67	17	8.8	38	6.9	22	9.440	2	15624	28	29.8	4
PHY 310 R	1418	4	42.6	3	107	16	70	3	9.6	32	7.4	11	8.783	14	16832	16	29.2	6
FM 1600 LL	1415	5	40.9	15	107	15	69	10	10.6	9	7.6	7	8.548	24	17101	13	27.0	18
ST 5242 BR	1408	6	41.8	6	106	20	68	12	11.4	5	8.4	1	7.587	32	20278	1	29.7	5
PHY 485 WRF	1396	7	39.7	22	116	2	67	18	9.7	31	6.6	36	9.702	1	14671	36	25.5	30
DP 445 BG/RR	1396	8	41.6	8	100	25	66	22	9.7	30	7.1	17	8.904	12	16081	23	27.6	16
ST 5599 BR	1388	9	41.0	13	107	18	63	31	11.0	8	7.9	3	8.047	31	17641	6	26.9	20
DP 117 B2RF	1385	10	41.2	10	107	16	68	13	10.1	18	7.3	13	8.672	19	17152	12	28.6	10
PHY 425 RF	1384	11	40.1	20	115	3	69	11	10.0	20	6.9	21	9.136	6	14798	35	24.7	33
DP 393	1378	12	41.4	9	98	30	68	16	10.4	10	7.5	9	8.309	28	16490	20	26.6	21
ST 4664 RF	1372	13	41.6	7	102	23	70	6	9.8	28	7.2	14	8.576	23	16531	19	28.2	12
DP 434 RR	1366	14	41.2	12	106	21	69	8	9.8	27	7.1	19	8.692	18	16901	14	29.1	7
ST 4554 B2RF	1365	15	40.3	19	95	33	63	32	10.3	13	7.1	18	8.671	20	16081	22	26.2	25
DP 147 RF	1360	16	41.2	11	113	5	61	36	9.8	29	7.0	20	8.813	13	16735	18	28.6	9
DP 455 BG/RR	1358	17	42.4	4	101	24	65	28	8.8	37	6.7	32	9.192	4	16873	15	32.3	2
PHY 480 WR	1334	18	39.2	31	117	1	62	34	10.2	16	6.7	24	9.042	8	14911	34	24.7	34
DP 167 RF	1325	19	39.5	26	114	4	61	37	9.9	24	6.6	34	9.120	7	14655	37	24.9	31
DP 164 B2RF	1323	20	39.7	23	111	10	61	35	9.9	25	6.7	31	8.947	11	14490	38	24.5	36
ST 5283 RF	1316	21	41.0	14	108	13	65	25	9.3	35	6.6	33	9.033	9	15248	33	27.7	15
ST 4357 B2RF	1314	22	40.3	18	107	14	67	21	10.3	11	7.2	16	8.246	29	16439	21	26.6	22
CG 3520B2RF	1308	23	39.5	27	99	28	70	3	10.0	21	6.7	28	8.761	16	15839	26	26.5	24
ST 4427 B2RF	1294	24	39.5	28	112	8	68	14	10.0	22	6.7	30	8.763	15	15495	29	26.0	26
FM 958LL	1291	25	40.1	21	99	26	64	29	11.4	6	7.8	4	7.542	33	16763	17	24.6	35
DG 2490 B2RF	1274	26	38.2	36	106	19	63	30	9.8	26	6.3	38	9.210	3	17488	7	29.8	3
DG 2520 B2RF	1272	27	39.4	29	111	9	67	20	10.2	14	6.8	23	8.421	25	15749	27	25.8	28
DG 2242 B2RF	1266	28	39.3	30	99	27	73	1	9.5	34	6.3	37	9.022	10	15405	31	27.1	17
ST 5327 B2RF	1261	29	40.5	16	104	22	63	33	9.6	33	6.7	25	8.592	22	15416	30	27.0	19
DP 143 B2RF	1255	30	39.0	33	110	11	56	38	10.0	19	6.6	35	8.670	21	15265	32	25.5	29
FM 9068F	1252	31	39.7	24	92	36	66	23	11.5	4	7.8	5	7.307	34	17912	4	25.9	27
DG 2100 B2RF	1243	32	39.1	32	96	32	70	5	10.2	15	6.7	26	8.346	26	17160	11	28.2	11
FM 9060F	1234	33	40.4	17	92	35	67	18	11.4	7	7.9	2	7.102	37	18960	2	27.9	14
CG 3020B2RF	1232	34	38.7	34	97	31	69	9	10.3	12	6.7	29	8.330	27	17338	9	28.1	13
CG 4020B2RF	1227	35	39.6	25	98	29	70	6	10.0	23	6.7	27	8.234	30	15841	25	26.6	23
FM 9063B2F	1175	36	38.5	35	91	37	65	25	11.7	3	7.5	8	7.116	36	17347	8	24.8	32
FM 955B2LL	1170	37	36.9	37	90	38	65	27	12.3	2	7.4	10	7.196	35	15853	24	21.6	38
TX-Maroon	837	38	34.7	38	94	34	72	2	13.5	1	7.3	12	5.195	38	17735	5	22.1	37
Mean	1315		40.2		104		66		10.3		7.1		8.453		16486		27.1	
Var. LSD 0.10	87		0.9		8		3		0.4		0.3		0.550		810		1.4	
Loc. LSD 0.10	28		0.3		2		1		0.1		0.1		0.177		184		0.3	
C.V.%	11.3		2.8		11.1		9.0		4.8		5.2		11.1		5.9		6.4	
R-sq x 100	78.9		88.7		74.7		62.9		91.4		87.1		78.8		87.0		91.6	
Prob (var x loc)	<0.001		0.003		0.007		<0.001		0.332		0.001		<0.001		0.859		0.002	

Table 5. Fiber properties - 2007 Main Cotton Variety Test across four Arkansas test sites.														
Variety	Lint yield lb/a	Q			Fiber properties									
		r	score	r	Mic	r	Len. in.	r	Unif. %	r	Str. g/tex	r	Elo. %	r
PHY 370 WR	1473	1	43	38	4.8	2	1.09	38	84.4	24	30.4	13	9.0	18
DP 454 BG/RR	1444	2	46	34	4.3	29	1.10	34	83.9	35	28.5	26	8.5	25
DP 515 BG/RR	1435	3	46	34	4.8	5	1.11	30	83.7	37	27.4	35	8.4	27
PHY 310 R	1418	4	45	36	4.8	3	1.09	37	84.4	23	30.5	12	9.2	13
FM 1600 LL	1415	5	65	14	4.6	15	1.15	13	84.9	9	29.6	18	7.1	37
ST 5242 BR	1408	6	48	33	4.5	19	1.10	33	84.1	31	27.4	34	9.0	17
PHY 485 WRF	1396	7	62	18	4.7	12	1.14	20	85.1	4	32.2	4	9.7	6
DP 445 BG/RR	1396	8	61	21	4.7	14	1.13	22	84.6	17	31.6	8	9.6	9
ST 5599 BR	1388	9	55	29	4.7	7	1.12	27	84.6	18	28.9	24	7.9	33
DP 117 B2RF	1385	10	55	28	4.5	17	1.12	28	83.9	34	31.0	10	8.4	26
PHY 425 RF	1384	11	59	23	4.9	1	1.13	24	85.5	1	32.5	2	9.5	10
DP 393	1378	12	58	25	4.8	4	1.13	25	85.0	8	31.9	6	9.4	12
ST 4664 RF	1372	13	51	30	4.7	7	1.11	31	84.1	29	31.5	9	10.2	2
DP 434 RR	1366	14	61	22	4.4	26	1.14	15	84.5	20	27.9	30	9.0	15
ST 4554 B2RF	1365	15	56	26	4.7	7	1.12	29	84.5	19	32.4	3	10.4	1
DP 147 RF	1360	16	72	7	4.3	32	1.18	5	84.1	30	27.7	32	8.0	30
DP 455 BG/RR	1358	17	61	20	4.2	36	1.14	19	83.6	38	29.6	19	7.8	35
PHY 480 WR	1334	18	61	19	4.7	10	1.13	21	85.4	2	32.6	1	9.6	7
DP 167 RF	1325	19	79	2	4.5	20	1.19	3	85.2	3	30.3	16	8.0	32
DP 164 B2RF	1323	20	73	6	4.7	11	1.17	8	85.0	7	29.5	20	8.0	29
ST 5283 RF	1316	21	66	13	4.5	20	1.14	17	85.1	6	32.1	5	8.9	22
ST 4357 B2RF	1314	22	72	8	4.5	22	1.16	10	84.9	10	28.3	28	8.9	20
CG 3520B2RF	1308	23	65	16	4.4	24	1.14	17	84.7	15	28.0	29	9.4	11
ST 4427 B2RF	1294	24	56	27	4.6	16	1.12	26	84.2	28	29.4	21	8.5	23
FM 958LL	1291	25	76	4	4.7	12	1.18	4	85.1	5	30.4	14	7.1	37
DG 2490 B2RF	1274	26	44	37	3.9	38	1.09	36	83.8	36	28.4	27	10.1	3
DG 2520 B2RF	1272	27	71	10	4.4	24	1.16	12	84.8	12	28.5	25	9.1	14
DG 2242 B2RF	1266	28	59	23	4.3	30	1.13	23	84.5	22	27.1	38	9.6	8
ST 5327 B2RF	1261	29	62	17	4.5	18	1.14	15	84.7	16	31.8	7	8.9	19
DP 143 B2RF	1255	30	77	3	4.3	28	1.19	1	84.2	27	30.2	17	8.5	24
FM 9068F	1252	31	76	5	4.4	27	1.18	6	84.8	11	30.4	15	7.9	34
DG 2100 B2RF	1243	32	49	32	4.3	33	1.10	35	84.3	26	27.5	33	10.0	4
FM 9060F	1234	33	71	11	4.3	33	1.17	7	84.0	33	27.3	36	7.8	36
CG 3020B2RF	1232	34	50	31	4.2	36	1.11	32	84.1	32	27.3	37	9.7	5
CG 4020B2RF	1227	35	65	15	4.4	23	1.14	14	84.3	25	27.8	31	9.0	16
FM 9063B2F	1175	36	81	1	4.3	31	1.19	2	84.8	13	30.5	11	8.0	31
FM 955B2LL	1170	37	68	12	4.7	6	1.17	9	84.8	14	28.9	23	8.0	28
TX-Maroon	837	38	71	9	4.2	35	1.16	11	84.5	21	29.2	22	8.9	21
Mean	1315		61		4.5		1.14		84.5		29.7		8.8	
Var. LSD 0.10	87		7		0.2		0.02		0.4		1.0		0.4	
Loc. LSD 0.10	28		ns		0.0		0.01		0.2		0.3		0.1	
C.V.%	11.3		14.0		4.9		1.8		0.9		3.9		5.0	
R-sq x 100	78.9		80.8		88.1		84.4		68.3		90.6		89.5	
Prob (var x loc)	<0.001		0.015		0.353		0.158		0.095		0.212		0.814	

Table 6. Yield and related properties - 2007 Main Cotton Variety Test at Keiser, Ark. (irrigated, Sharkey silty clay).

Variety	Lint yield	r	Lint frac.	r	Ht.	r	Open bolls	r	Seed index	r	Lint index	r	Seed per a	r	Fibers/ seed	r	Fiber den.	r
	lb/a		%		cm		%		g		g		mil.		no.		no.	
DP 455 BG/RR	1627	1	44.2	1	95	5	61	31	8.1	36	6.7	17	11.060	2	18046	9	37.0	2
DP 393	1595	2	42.0	7	90	17	64	26	9.9	10	7.4	5	9.810	13	17187	18	28.9	24
DP 164 B2RF	1564	3	40.6	15	93	9	63	28	9.4	18	6.6	21	10.760	4	15290	34	27.2	31
PHY 310 R	1560	4	42.3	5	97	3	68	12	8.9	28	6.7	15	10.520	6	16795	22	31.5	13
DP 515 BG/RR	1508	5	43.2	4	98	1	69	9	8.4	35	6.6	20	10.340	8	16186	26	32.0	10
PHY 370 WR	1501	6	43.2	3	93	9	71	7	9.2	22	7.2	7	9.458	18	18093	8	33.0	6
DP 167 RF	1484	7	38.9	32	98	1	54	37	8.9	29	5.8	34	11.610	1	13979	38	26.3	35
PHY 425 RF	1483	8	40.0	22	91	14	72	5	9.4	17	6.5	23	10.400	7	15097	36	26.8	34
ST 4357 B2RF	1454	9	40.5	18	85	23	64	26	10.0	9	7.0	9	9.424	19	17601	16	29.4	21
DP 147 RF	1425	10	41.4	10	95	4	56	36	9.1	25	6.6	19	9.756	15	17035	20	31.2	14
PHY 485 WRF	1398	11	38.8	34	91	15	68	16	8.8	30	5.8	36	11.000	3	14361	37	27.2	32
ST 4427 B2RF	1386	12	40.3	20	93	8	66	24	9.2	21	6.4	25	9.820	12	16494	23	30.0	17
DP 143 B2RF	1384	13	40.1	21	91	13	51	38	9.0	26	6.2	29	10.120	10	15905	29	29.7	20
ST 5283 RF	1381	14	41.2	12	90	16	66	22	8.0	37	5.9	33	10.690	5	15719	32	32.6	9
FM 1600 LL	1368	15	40.6	17	94	7	69	9	10.7	7	7.5	4	8.296	31	17958	11	28.1	28
DP 445 BG/RR	1367	16	41.4	11	82	29	67	19	9.1	23	6.6	18	9.349	20	15896	30	29.0	23
DP 434 RR	1349	17	41.5	9	94	6	70	8	8.8	30	6.4	24	9.498	17	18766	5	35.5	3
FM 9068F	1347	18	39.8	25	85	23	58	35	11.1	3	7.5	3	8.170	33	18114	7	27.2	30
ST 4554 B2RF	1345	19	40.4	19	83	28	61	31	9.6	14	6.7	16	9.113	23	15926	28	27.7	29
DP 117 B2RF	1340	20	40.7	13	88	20	68	16	9.7	12	6.9	11	8.881	26	19025	4	32.8	7
FM 958LL	1333	21	40.6	14	78	34	66	22	10.8	5	7.6	2	7.971	34	16911	21	26.1	36
ST 5599 BR	1324	22	40.6	16	89	19	66	24	9.9	11	6.9	10	8.678	30	17833	13	30.0	16
DP 454 BG/RR	1317	23	43.9	2	93	11	67	19	7.5	38	6.1	30	9.754	16	19290	2	42.8	1
ST 4664 RF	1314	24	41.8	8	92	12	68	12	9.1	24	6.7	14	8.851	28	17333	17	31.8	11
CG 4020B2RF	1309	25	39.5	28	79	32	67	19	9.5	16	6.4	26	9.323	21	16330	24	28.6	26
ST 5242 BR	1304	26	42.3	6	87	21	74	3	10.6	8	8.0	1	7.448	36	20808	1	32.8	8
DG 2520 B2RF	1300	27	39.6	26	83	25	68	12	9.4	18	6.3	28	9.317	22	15854	31	28.3	27
ST 5327 B2RF	1280	28	39.6	27	85	22	61	29	8.5	34	5.8	35	10.020	11	16075	27	31.6	12
CG 3520B2RF	1278	29	39.8	24	83	25	73	4	9.5	15	6.5	22	8.934	25	17048	19	29.8	19
DG 2490 B2RF	1251	30	38.2	35	83	25	59	34	8.7	33	5.6	38	10.220	9	17698	15	33.9	4
PHY 480 WR	1239	31	38.9	31	89	18	68	12	8.8	32	5.8	37	9.768	14	15108	35	28.8	25
FM 955B2LL	1226	32	36.6	37	80	31	60	33	11.5	2	6.8	13	8.185	32	16273	25	23.7	38
DG 2100 B2RF	1222	33	40.0	23	79	33	69	9	9.2	20	6.4	27	8.784	29	18577	6	33.7	5
FM 9060F	1218	34	39.3	30	70	38	68	16	10.8	6	7.2	8	7.703	35	19274	3	29.8	18
FM 9063B2F	1183	35	39.3	29	74	36	61	29	11.0	4	7.3	6	7.337	37	17953	12	27.2	33
DG 2242 B2RF	1175	36	38.8	33	81	30	72	5	9.0	27	5.9	32	9.092	24	15674	33	29.2	22
CG 3020B2RF	1172	37	37.7	36	77	35	75	2	9.6	13	6.0	31	8.874	27	18008	10	31.2	15
TX-Maroon	745	38	36.0	38	72	37	76	1	11.8	1	6.8	12	4.959	38	17714	14	24.9	37
Mean	1343		40.4		87		66		9.5		6.6		9.300		17032		30.2	
LSD 0.10	142		2.0		9		8		0.8		0.8		0.987		2020		3.3	
C.V.%	8.9		2.9		8.8		9.8		4.7		6.9		9.0		7.0		6.5	
R-sq x 100	73.3		82.8		55.0		56.1		90.4		76.5		77.9		75.2		87.2	

Table 7. Fiber properties - 2007 Main Cotton Variety Test at Keiser, Ark. (irrigated, Sharkey silty clay).															
Variety	Lint yield lb/a	Q		Fiber properties											
		r	score	r											
					Mic	r	Len. in.	r	Unif. %	r	Str. g/tex	r	Elo. %	r	
DP 455 BG/RR	1627	1	66	14	3.8	32	1.16	13	84.0	33	30.1	15	7.6	36	
DP 393	1595	2	71	9	4.4	3	1.16	14	85.6	4	31.1	8	9.5	6	
DP 164 B2RF	1564	3	74	8	4.4	3	1.18	7	84.5	17	28.8	21	8.1	27	
PHY 310 R	1560	4	53	32	4.3	6	1.11	33	84.4	22	30.3	12	9.0	14	
DP 515 BG/RR	1508	5	60	27	4.3	5	1.14	19	83.8	35	27.2	32	8.2	26	
PHY 370 WR	1501	6	52	33	4.3	6	1.10	37	84.4	21	30.3	12	8.8	16	
DP 167 RF	1484	7	81	4	4.1	13	1.20	4	84.9	11	28.9	19	7.9	30	
PHY 425 RF	1483	8	66	14	4.4	1	1.14	22	85.9	2	33.2	1	9.4	10	
ST 4357 B2RF	1454	9	66	14	4.1	13	1.16	14	84.2	25	28.4	24	8.6	20	
DP 147 RF	1425	10	65	18	4.0	22	1.16	11	84.2	25	26.9	36	7.9	30	
PHY 485 WRF	1398	11	60	24	4.2	10	1.12	31	85.4	8	31.3	7	9.6	3	
ST 4427 B2RF	1386	12	56	30	4.2	11	1.13	27	83.0	37	28.4	23	8.4	24	
DP 143 B2RF	1384	13	75	7	3.9	28	1.21	1	84.1	29	28.1	26	8.3	25	
ST 5283 RF	1381	14	65	19	3.9	28	1.14	22	85.4	7	31.5	4	8.7	18	
FM 1600 LL	1368	15	76	6	4.2	11	1.18	7	85.5	6	29.4	17	7.2	37	
DP 445 BG/RR	1367	16	66	17	4.3	6	1.14	19	85.3	9	30.9	9	9.5	6	
DP 434 RR	1349	17	60	24	3.5	36	1.17	10	84.5	17	27.8	29	9.0	13	
FM 9068F	1347	18	78	5	4.1	13	1.19	5	84.7	13	30.5	10	7.6	34	
ST 4554 B2RF	1345	19	62	21	4.4	1	1.14	22	84.2	25	31.4	5	10.1	1	
DP 117 B2RF	1340	20	54	31	3.9	30	1.14	22	82.8	38	28.9	19	7.6	34	
FM 958LL	1333	21	89	1	4.3	6	1.21	1	86.2	1	30.3	12	6.8	38	
ST 5599 BR	1324	22	58	29	4.1	13	1.13	29	84.5	17	28.5	22	7.8	33	
DP 454 BG/RR	1317	23	36	38	3.5	37	1.11	33	83.4	36	26.6	38	8.6	20	
ST 4664 RF	1314	24	59	28	4.1	13	1.13	27	84.0	31	31.7	2	9.8	2	
CG 4020B2RF	1309	25	64	20	4.1	21	1.14	19	84.6	16	28.1	25	8.7	18	
ST 5242 BR	1304	26	50	34	4.1	13	1.11	33	84.4	20	26.7	37	8.5	23	
DG 2520 B2RF	1300	27	67	12	4.1	13	1.15	17	84.7	13	27.9	28	8.8	16	
ST 5327 B2RF	1280	28	62	21	3.7	33	1.15	18	84.9	11	31.4	6	8.6	22	
CG 3520B2RF	1278	29	67	12	3.9	27	1.16	11	84.4	22	27.2	32	9.5	6	
DG 2490 B2RF	1251	30	37	37	3.4	38	1.10	37	84.0	31	28.0	27	9.6	3	
PHY 480 WR	1239	31	61	23	4.0	22	1.13	29	85.0	10	31.7	3	9.4	10	
FM 955B2LL	1226	32	81	3	4.1	13	1.19	5	85.7	3	29.2	18	8.1	28	
DG 2100 B2RF	1222	33	46	35	3.7	34	1.11	32	84.1	29	27.3	31	9.6	5	
FM 9060F	1218	34	67	11	3.8	31	1.17	9	84.0	33	26.9	35	7.9	32	
FM 9063B2F	1183	35	85	2	4.0	24	1.21	1	85.5	5	30.5	10	8.1	28	
DG 2242 B2RF	1175	36	60	24	3.9	26	1.14	22	84.7	15	27.4	30	9.2	12	
CG 3020B2RF	1172	37	43	36	3.6	35	1.11	33	84.2	25	27.1	34	9.5	6	
TX-Maroon	745	38	68	10	4.0	24	1.16	14	84.4	22	30.0	16	8.9	15	
Mean	1343		63		4.0		1.15		84.5		29.2		8.6		
LSD 0.10	142		14		0.3		0.03		1.3		1.7		0.7		
C.V.%	8.9		13.6		4.8		1.8		0.9		3.4		5.1		
R-sq x 100	73.3		79.9		79.2		83.0		68.5		86.3		86.9		

Variety	Lint yield lb/a	r	Lint frac. %	r	Ht. cm	r	Open bolls %	r	Seed index g	r	Lint index g	r	Seed per a mil.	r	Fibers/ seed no.	r	Fiber den. no.	r
DP 434 RR	1688	1	44.1	2	116	16	61	17	9.6	34	7.8	10	9.819	4	17724	10	30.9	3
ST 4664 RF	1612	2	42.8	7	110	24	65	3	9.9	29	7.6	13	9.588	7	16950	15	28.5	8
ST 4554 B2RF	1603	3	41.2	15	100	35	60	21	10.5	16	7.5	15	9.643	6	16622	17	26.4	19
PHY 370 WR	1585	4	43.7	4	119	13	60	21	10.3	22	8.2	5	8.763	24	18071	7	29.2	5
DP 515 BG/RR	1570	5	44.9	1	114	18	61	17	8.6	38	7.2	27	9.819	5	15842	30	30.7	4
DP 454 BG/RR	1568	6	43.8	3	124	8	60	21	9.4	36	7.5	16	9.482	9	18195	5	32.3	1
DG 2520 B2RF	1542	7	40.5	24	125	7	59	30	10.5	17	7.3	23	9.584	8	16350	22	26.0	23
FM 1600 LL	1522	8	41.1	18	113	19	65	3	10.5	17	7.9	8	9.257	15	18091	6	28.8	6
DP 167 RF	1516	9	41.4	13	126	6	59	30	10.1	28	7.3	24	9.436	11	16045	25	26.6	18
DP 117 B2RF	1507	10	41.4	12	121	12	64	7	10.2	25	7.4	22	9.292	13	16597	18	27.3	14
DG 2490 B2RF	1503	11	39.3	32	117	14	60	21	10.4	19	6.9	34	9.850	3	17765	9	28.4	9
PHY 485 WRF	1501	12	40.7	23	145	1	56	34	10.4	20	7.3	25	9.341	12	14787	34	23.8	32
DP 455 BG/RR	1498	13	42.9	6	101	32	60	21	8.9	37	6.9	35	9.893	1	16809	16	31.6	2
ST 4357 B2RF	1488	14	41.1	16	130	4	58	32	10.7	11	7.6	12	8.843	22	16489	21	25.8	24
ST 5242 BR	1477	15	41.1	17	113	22	64	7	11.9	5	8.5	1	7.905	31	19100	2	26.8	16
DG 2100 B2RF	1475	16	39.5	31	105	26	60	21	10.9	10	7.3	26	9.215	16	17442	13	26.8	17
ST 5599 BR	1474	17	41.0	21	123	9	58	32	11.7	6	8.3	4	8.064	29	17707	11	25.2	27
CG 3520B2RF	1463	18	41.0	19	102	30	64	7	10.1	27	7.2	28	9.186	17	16508	20	27.3	13
DP 445 BG/RR	1453	19	42.6	9	107	25	63	13	9.7	33	7.4	21	8.949	21	16242	23	27.9	11
ST 5327 B2RF	1439	20	41.0	20	115	17	60	21	9.9	30	7.0	30	9.273	14	15156	33	25.6	25
DG 2242 B2RF	1436	21	40.2	26	104	27	65	3	9.6	35	6.6	37	9.868	2	15623	31	27.3	12
PHY 425 RF	1425	22	40.1	27	130	5	61	17	10.3	24	7.1	29	9.140	18	14158	36	22.9	35
DP 147 RF	1424	23	41.5	11	131	2	56	34	10.3	22	7.5	17	8.637	25	16214	24	26.3	20
DP 164 B2RF	1420	24	40.4	25	121	11	56	34	9.8	31	6.8	36	9.477	10	13969	38	23.7	33
CG 3020B2RF	1390	25	38.9	34	113	20	60	21	10.6	13	7.0	32	9.054	20	15966	26	25.0	29
ST 5283 RF	1378	26	41.6	10	113	20	63	13	10.1	26	7.4	20	8.467	27	15898	28	26.2	21
PHY 480 WR	1364	27	39.1	33	131	3	56	34	10.6	14	7.0	31	8.823	23	14487	35	22.7	36
DP 393	1338	28	43.5	5	101	34	64	7	10.5	15	8.3	3	7.312	33	17827	8	28.3	10
ST 4427 B2RF	1322	29	39.9	29	122	10	61	17	10.9	9	7.4	19	8.070	28	15858	29	24.2	30
PHY 310 R	1306	30	42.8	8	111	23	64	7	9.7	32	7.5	18	7.957	30	16582	19	28.5	7
CG 4020B2RF	1304	31	39.7	30	102	31	68	2	10.3	21	7.0	33	8.495	26	15564	32	25.1	28
DP 143 B2RF	1297	32	37.3	36	117	15	55	38	10.6	12	6.5	38	9.078	19	14151	37	22.2	37
FM 9063B2F	1287	33	38.7	35	102	29	60	21	12.2	3	7.8	9	7.445	32	17641	12	24.1	31
FM 958LL	1273	34	40.7	22	101	33	63	13	11.4	8	8.0	7	7.207	35	17425	14	25.4	26
FM 9060F	1272	35	41.3	14	103	28	63	13	11.7	7	8.4	2	6.873	37	18970	3	27.2	15
FM 9068F	1257	36	39.9	28	94	36	65	3	12.0	4	8.2	6	6.975	36	18740	4	26.1	22
FM 955B2LL	1223	37	37.3	37	92	37	64	7	12.6	2	7.7	11	7.250	34	15943	27	21.2	38
TX-Maroon	970	38	35.0	38	92	38	70	1	13.8	1	7.6	14	5.823	38	19274	1	23.4	34
Mean	1425		40.9		113		61		10.6		7.5		8.751		16633		26.4	
LSD 0.10	212		1.9		16		6		0.6		0.6		1.281		1506		2.8	
C.V.%	12.7		2.7		12.2		7.7		3.5		4.8		12.5		5.3		6.3	
R-sq x 100	54.3		87.3		65.3		63.8		94.0		80.6		61.2		83.9		83.7	

Table 9. Fiber properties - 2007 Main Cotton Variety Test at Judd Hill, Ark. (irrigated, Dundee silt loam).														
Variety	Lint yield lb/a	Q			Fiber properties									
		r	score	r	Mic	r	Len. in.	r	Unif. %	r	Str. g/tex	r	Elo. %	r
DP 434 RR	1688	1	64	18	4.6	26	1.13	18	84.8	14	27.2	35	9.0	17
ST 4664 RF	1612	2	45	33	5.0	8	1.09	33	83.9	29	30.8	10	9.8	4
ST 4554 B2RF	1603	3	55	28	4.9	14	1.11	27	84.8	13	33.7	1	10.5	1
PHY 370 WR	1585	4	31	37	5.2	2	1.06	37	83.7	31	28.8	23	9.1	15
DP 515 BG/RR	1570	5	29	38	5.2	2	1.08	35	82.6	38	26.2	38	8.3	26
DP 454 BG/RR	1568	6	42	35	4.7	23	1.07	36	83.4	36	28.0	31	8.5	24
DG 2520 B2RF	1542	7	79	2	4.5	32	1.17	3	84.9	10	28.2	29	9.2	13
FM 1600 LL	1522	8	63	21	4.9	13	1.14	17	84.5	21	29.7	17	7.2	38
DP 167 RF	1516	9	75	6	4.6	26	1.17	4	84.9	10	30.4	12	8.1	30
DP 117 B2RF	1507	10	57	25	4.8	18	1.12	25	83.8	30	31.3	9	8.9	20
DG 2490 B2RF	1503	11	50	31	4.3	37	1.09	33	83.6	33	28.2	27	10.3	2
PHY 485 WRF	1501	12	64	16	5.1	6	1.15	13	85.4	3	32.0	5	9.5	7
DP 455 BG/RR	1498	13	56	27	4.5	34	1.11	27	83.2	37	29.1	20	7.6	35
ST 4357 B2RF	1488	14	70	10	4.8	18	1.15	13	85.2	4	28.0	32	9.3	12
ST 5242 BR	1477	15	48	32	4.9	14	1.10	31	83.7	31	27.7	33	9.1	15
DG 2100 B2RF	1475	16	57	25	4.5	32	1.10	30	84.2	27	28.2	26	10.2	3
ST 5599 BR	1474	17	61	23	4.9	11	1.13	20	85.1	6	29.0	21	8.0	32
CG 3520B2RF	1463	18	66	15	4.6	24	1.13	20	84.7	16	28.2	28	9.5	10
DP 445 BG/RR	1453	19	64	16	4.8	18	1.13	18	84.8	14	32.0	7	9.5	7
ST 5327 B2RF	1439	20	54	29	5.0	8	1.11	27	85.0	9	32.0	5	9.0	17
DG 2242 B2RF	1436	21	62	22	4.5	34	1.13	20	84.6	19	27.0	36	9.6	5
PHY 425 RF	1425	22	52	30	5.3	1	1.12	25	85.5	1	32.5	3	9.6	5
DP 147 RF	1424	23	72	9	4.7	22	1.17	4	84.3	24	27.6	34	8.1	30
DP 164 B2RF	1420	24	77	3	4.9	14	1.18	2	85.5	1	30.4	14	7.8	33
CG 3020B2RF	1390	25	63	20	4.6	26	1.12	24	84.9	10	28.4	25	9.2	13
ST 5283 RF	1378	26	68	12	4.8	17	1.14	15	85.1	6	32.4	4	8.7	22
PHY 480 WR	1364	27	64	18	5.0	7	1.14	15	85.2	4	33.4	2	9.5	7
DP 393	1338	28	43	34	5.1	4	1.10	31	83.6	34	31.5	8	9.0	19
ST 4427 B2RF	1322	29	61	23	4.9	11	1.13	20	85.1	6	30.3	15	8.4	25
PHY 310 R	1306	30	32	36	5.1	4	1.06	37	83.6	34	29.3	19	9.4	11
CG 4020B2RF	1304	31	73	8	4.6	24	1.15	10	84.7	16	28.1	30	8.9	21
DP 143 B2RF	1297	32	85	1	4.6	30	1.20	1	84.3	23	30.4	12	8.3	26
FM 9063B2F	1287	33	74	7	4.6	30	1.16	8	84.7	18	29.7	16	8.1	28
FM 958LL	1273	34	69	11	4.8	18	1.15	10	84.4	22	29.6	18	7.3	36
FM 9060F	1272	35	66	13	4.6	26	1.15	10	84.0	28	27.0	37	7.3	36
FM 9068F	1257	36	76	5	4.5	34	1.17	4	84.3	24	30.6	11	8.1	28
FM 955B2LL	1223	37	66	13	5.0	8	1.16	8	84.6	19	28.7	24	7.7	34
TX-Maroon	970	38	76	4	4.0	38	1.17	4	84.2	26	28.9	22	8.7	22
Mean	1425		61		4.7		1.13		84.4		29.6		8.8	
LSD 0.10	212		12		0.4		0.03		1.1		2.2		0.8	
C.V.%	12.7		11.4		4.4		4.4		0.8		4.4		5.3	
R-sq x 100	54.3		88.4		75.7		75.7		70.8		81.5		86.7	

Variety	Lint yield lb/a	r	Lint frac. %	r	Ht. cm	r	Open bolls %	r	Seed index g	r	Lint index g	r	Seed per a mil.	r	Fibers/ seed no.	r	Fiber den. no.	r
DP 445 BG/RR	1783	1	43.6	3	110	25	66	24	9.8	29	7.8	6	10.420	1	18015	9	30.6	8
PHY 370 WR	1719	2	43.1	6	126	3	73	10	9.9	25	7.7	8	10.100	3	17289	21	29.0	18
ST 5242 BR	1643	3	42.3	13	118	14	61	31	11.7	3	8.8	1	8.457	31	22480	1	32.1	3
ST 4664 RF	1618	4	43.1	7	105	31	71	14	10.0	22	7.8	7	9.462	11	17548	16	29.3	15
PHY 310 R	1578	5	43.9	1	112	19	76	3	9.5	32	7.7	10	9.329	13	17984	10	31.5	5
CG 3520B2RF	1570	6	40.2	29	111	24	76	3	10.3	13	7.1	23	9.989	4	16798	29	27.2	29
DG 2100 B2RF	1547	7	41.1	22	106	30	78	2	10.3	14	7.4	18	9.550	9	18221	8	29.6	13
DP 434 RR	1542	8	42.4	12	107	29	75	5	10.2	16	7.7	11	9.125	18	17568	14	28.8	20
ST 5283 RF	1525	9	42.9	8	120	7	61	31	9.1	35	7.0	30	9.864	6	15923	35	29.2	16
ST 5599 BR	1520	10	42.6	10	108	26	65	27	10.7	8	8.2	2	8.453	32	18413	7	28.6	22
ST 4554 B2RF	1511	11	41.5	18	102	35	59	35	10.1	20	7.3	19	9.372	12	16868	28	28.0	25
DP 454 BG/RR	1510	12	43.2	5	121	6	64	28	9.1	36	7.1	25	9.655	8	17387	19	32.0	4
PHY 480 WR	1506	13	39.2	35	131	1	56	37	10.5	11	7.0	34	9.829	7	15346	38	24.6	36
DP 393	1498	14	42.4	11	103	33	75	5	10.4	12	7.8	5	8.684	29	16895	26	27.2	28
ST 4427 B2RF	1493	15	39.8	32	119	8	71	14	10.1	19	6.9	36	9.875	5	17009	24	28.1	24
DG 2490 B2RF	1488	16	39.5	33	119	11	66	24	9.9	23	6.7	37	10.160	2	19326	4	32.4	2
FM 9060F	1482	17	41.1	21	104	32	70	18	11.1	5	8.0	3	8.434	34	20450	2	30.7	7
DP 117 B2RF	1473	18	42.7	9	112	19	69	21	9.7	30	7.4	15	9.026	21	17566	15	30.3	9
FM 958LL	1470	19	39.9	30	119	10	61	31	10.9	7	7.4	14	8.971	22	16979	25	25.9	35
CG 4020B2RF	1462	20	41.5	19	115	16	73	10	9.9	23	7.3	20	9.105	20	17677	13	29.6	12
DG 2242 B2RF	1453	21	41.0	23	112	19	81	1	9.9	26	7.1	27	9.295	15	16873	27	28.4	23
DP 147 RF	1440	22	41.4	20	111	23	63	30	9.8	28	7.1	24	9.171	17	17891	11	30.2	11
DP 167 RF	1435	23	41.6	17	119	8	68	23	9.6	31	7.0	32	9.309	14	16076	33	27.9	26
ST 4357 B2RF	1434	24	42.1	15	107	28	75	5	10.1	18	7.5	12	8.628	30	17833	12	29.4	14
FM 1600 LL	1430	25	41.7	16	115	17	70	18	10.2	15	7.5	13	8.713	28	17443	17	28.6	21
DP 515 BG/RR	1427	26	43.8	2	118	15	64	28	8.8	37	7.1	26	9.123	19	16044	34	30.3	10
DP 164 B2RF	1420	27	40.4	27	119	12	61	31	10.0	21	7.0	33	9.234	16	15891	36	26.5	32
ST 5327 B2RF	1410	28	42.3	14	112	22	59	35	9.5	33	7.1	22	8.961	23	16412	31	29.0	19
DG 2520 B2RF	1406	29	39.4	34	126	2	66	24	10.7	9	7.1	21	8.929	24	17349	20	27.0	31
FM 9068F	1391	30	39.9	31	99	36	74	8	11.3	4	7.7	9	8.203	36	18481	6	27.2	30
PHY 425 RF	1379	31	40.8	24	124	4	69	21	9.9	27	7.1	28	8.874	26	15442	37	26.0	34
FM 955B2LL	1371	32	38.5	36	98	37	71	14	12.3	2	7.9	4	7.909	37	17151	23	23.2	37
CG 3020B2RF	1369	33	40.6	25	102	34	73	10	10.5	10	7.4	17	8.446	33	19638	3	31.1	6
PHY 485 WRF	1356	34	40.5	26	112	18	74	8	9.2	34	6.5	38	9.511	10	16128	32	29.1	17
DP 455 BG/RR	1355	35	43.3	4	108	27	71	14	8.8	38	6.9	35	8.921	25	18724	5	35.7	1
DP 143 B2RF	1352	36	40.4	28	122	5	51	38	10.1	17	7.0	29	8.719	27	16714	30	27.5	27
FM 9063B2F	1271	37	38.3	37	97	38	73	10	11.0	6	7.0	31	8.226	35	17207	22	26.2	33
TX-Maroon	1030	38	33.6	38	118	13	70	18	14.2	1	7.4	16	6.347	38	17416	18	20.5	38
Mean	1462		41.2		113		68		10.2		7.4		9.051		17485		28.6	
LSD 0.10	174		1.8		14		10		0.8		0.5		1.081		1486		2.7	
C.V.%	9.9		2.5		10.8		11.9		4.4		4.3		10.0		5.0		5.6	
R-sq x 100	65.0		87.8		42.9		53.6		90.7		80.0		64.0		83.1		86.3	

Table 11. Fiber properties - 2007 Main Cotton Variety Test at Marianna, Ark. (irrigated, Callaway silt loam).														
Variety	Lint yield lb/a	Fiber properties												
		Q												
		r	score	r	Mic	r	Len. in.	r	Unif. %	r	Str. g/tex	r	Elo. %	r
DP 445 BG/RR	1783	1	61	25	4.6	11	1.13	25	84.3	19	29.6	5	9.9	8
PHY 370 WR	1719	2	41	36	4.9	1	1.08	37	84.5	14	28.6	11	9.0	21
ST 5242 BR	1643	3	44	33	4.4	19	1.09	36	83.3	34	25.7	37	9.6	13
ST 4664 RF	1618	4	52	30	4.8	4	1.11	29	83.9	26	29.1	9	11.0	1
PHY 310 R	1578	5	41	35	4.8	4	1.07	38	84.1	22	28.7	10	9.3	18
CG 3520B2RF	1570	6	65	18	4.4	18	1.14	20	85.1	4	26.6	27	9.7	10
DG 2100 B2RF	1547	7	52	30	4.4	19	1.10	34	84.9	7	26.1	34	10.4	4
DP 434 RR	1542	8	71	10	4.5	15	1.16	11	84.8	8	26.3	30	9.4	15
ST 5283 RF	1525	9	69	13	4.6	11	1.15	16	84.7	11	29.4	6	9.4	15
ST 5599 BR	1520	10	41	36	4.9	2	1.10	32	83.2	36	26.1	32	8.2	33
ST 4554 B2RF	1511	11	57	29	4.7	8	1.11	29	84.3	18	29.4	6	10.7	2
DP 454 BG/RR	1510	12	59	26	4.4	19	1.12	26	83.9	27	27.8	17	8.7	25
PHY 480 WR	1506	13	66	17	4.7	8	1.14	19	85.6	1	31.2	1	9.6	11
DP 393	1498	14	66	16	4.8	4	1.15	16	85.2	2	30.7	2	9.6	11
ST 4427 B2RF	1493	15	62	22	4.3	27	1.13	24	84.1	25	27.5	18	8.5	27
DG 2490 B2RF	1488	16	42	34	3.8	38	1.10	32	83.7	30	27.0	24	10.6	3
FM 9060F	1482	17	68	15	4.0	36	1.17	9	83.5	32	25.4	38	8.5	29
DP 117 B2RF	1473	18	59	26	4.5	14	1.12	28	84.1	21	30.0	3	8.9	22
FM 958LL	1470	19	82	1	4.4	19	1.20	1	84.2	20	28.0	16	7.6	37
CG 4020B2RF	1462	20	63	21	4.3	26	1.15	16	83.8	28	26.1	34	9.6	13
DG 2242 B2RF	1453	21	69	13	4.3	25	1.15	14	85.1	4	26.5	28	9.8	9
DP 147 RF	1440	22	73	7	4.1	35	1.19	2	83.4	33	26.9	26	8.0	36
DP 167 RF	1435	23	79	3	4.4	19	1.19	2	84.4	16	27.0	25	8.2	32
ST 4357 B2RF	1434	24	75	5	4.3	27	1.18	5	84.8	8	26.2	31	9.4	17
FM 1600 LL	1430	25	65	18	4.5	15	1.14	20	84.7	11	27.5	19	7.4	38
DP 515 BG/RR	1427	26	40	38	4.9	3	1.09	35	83.8	28	26.1	32	8.7	24
DP 164 B2RF	1420	27	73	7	4.5	15	1.17	9	84.5	14	26.5	29	8.3	30
ST 5327 B2RF	1410	28	64	20	4.6	11	1.15	14	83.3	35	28.6	11	8.5	27
DG 2520 B2RF	1406	29	72	9	4.2	31	1.16	12	85.0	6	27.4	20	8.9	23
FM 9068F	1391	30	80	2	4.2	32	1.18	4	85.2	3	28.1	14	8.1	34
PHY 425 RF	1379	31	62	23	4.8	4	1.14	20	84.8	8	28.4	13	10.0	7
FM 955B2LL	1371	32	70	11	4.7	8	1.18	5	84.1	22	27.2	22	8.3	31
CG 3020B2RF	1369	33	50	32	4.1	34	1.11	31	83.1	38	26.1	34	10.2	5
PHY 485 WRF	1356	34	61	24	4.3	27	1.12	26	84.4	16	29.7	4	10.2	5
DP 455 BG/RR	1355	35	57	28	3.9	37	1.14	20	83.2	36	27.2	22	8.6	26
DP 143 B2RF	1352	36	70	11	4.4	19	1.16	12	84.1	22	29.4	6	9.2	19
FM 9063B2F	1271	37	75	5	4.2	32	1.18	7	83.6	31	28.1	14	8.1	34
TX-Maroon	1030	38	76	4	4.3	27	1.18	7	84.6	13	27.2	21	9.2	20
Mean	1462		62		4.4		1.14		84.2		27.7		9.1	
LSD 0.10	174		15		0.4		0.04		1.3		1.5		0.6	
C.V.%	9.9		13.9		5.6		2.0		0.9		3.3		3.7	
R-sq x 100	65.0		79.2		70.8		81.5		58.5		84.0		93.2	

Table 12. Yield and related properties - 2007 Main Cotton Variety Test at Rohwer, Ark. (irrigated, Desha silt loam).

Variety	Lint yield	r	Lint frac.	r	Ht.	r	Open bolls	r	Seed index	r	Lint index	r	Seed per a	r	Fibers/ seed	r	Fiber den.	r
	lb/a		%		cm		%		g		g		mil.		no.		no.	
DP 454 BG/RR	1380	1	44.8	1	.	.	70	16	9.7	35	8.1	4	7.775	7	17788	2	30.7	1
FM 1600 LL	1341	2	40.4	5	.	.	71	13	11.0	12	7.7	8	7.925	5	15408	13	23.5	14
PHY 485 WRF	1329	3	39.0	16	.	.	70	16	10.2	28	6.7	19	8.952	1	13409	34	21.8	27
PHY 480 WR	1270	4	39.6	10	.	.	69	22	10.8	14	7.3	13	7.947	4	14700	17	22.8	24
PHY 425 RF	1249	5	39.3	12	.	.	73	8	10.4	22	7.0	15	8.132	3	14493	18	23.1	16
DP 515 BG/RR	1236	6	41.2	4	.	.	74	2	9.2	38	6.6	22	8.476	2	14424	19	26.3	3
ST 5599 BR	1236	7	40.0	7	.	.	65	35	11.7	7	8.0	5	6.993	15	16612	4	23.8	11
PHY 310 R	1229	8	41.4	3	.	.	74	2	10.5	19	7.6	9	7.323	11	15967	8	25.4	4
DP 117 B2RF	1221	9	40.1	6	.	.	73	8	10.8	13	7.4	12	7.488	9	15419	12	23.8	10
ST 5242 BR	1208	10	41.5	2	.	.	74	2	11.5	8	8.4	1	6.539	24	18723	1	27.1	2
DP 147 RF	1150	11	39.8	8	.	.	69	22	10.1	31	6.8	18	7.687	8	14868	16	24.7	7
FM 958LL	1087	12	39.0	15	.	.	66	31	12.4	4	8.2	2	6.018	32	15737	11	21.1	34
PHY 370 WR	1086	13	39.5	11	.	.	69	22	11.1	9	7.5	11	6.597	22	15786	9	23.6	12
DP 393	1081	14	37.7	25	.	.	69	22	10.6	18	6.6	24	7.430	10	14050	24	22.2	25
DP 445 BG/RR	1078	15	38.9	18	.	.	70	16	10.3	27	6.7	20	7.279	13	14169	23	23.1	18
FM 9068F	1047	16	39.3	13	.	.	69	22	11.8	6	7.8	7	6.102	30	16312	7	23.1	17
DG 2242 B2RF	1001	17	37.1	31	.	.	75	1	9.5	36	5.8	38	7.833	6	13450	32	23.5	13
ST 4554 B2RF	999	18	38.1	22	.	.	73	8	11.0	11	6.9	17	6.556	23	14908	15	22.8	23
CG 3020B2RF	996	19	37.7	27	.	.	69	22	10.5	21	6.5	26	6.944	16	15742	10	25.1	5
DP 143 B2RF	986	20	38.2	20	.	.	66	31	10.4	23	6.6	23	6.764	20	14291	22	22.8	22
ST 5283 RF	982	21	38.2	21	.	.	70	16	9.9	33	6.3	32	7.105	14	13454	31	22.8	21
ST 4427 B2RF	977	22	37.7	26	.	.	74	2	9.7	34	6.1	34	7.288	12	12622	37	21.6	32
FM 9060F	963	23	39.8	9	.	.	68	30	11.9	5	8.1	3	5.399	37	17145	3	24.0	9
FM 9063B2F	963	24	37.6	28	.	.	66	31	12.8	3	7.9	6	5.512	35	16585	5	21.7	30
ST 5327 B2RF	952	25	38.9	19	.	.	70	16	10.7	16	7.0	16	6.209	27	14019	26	21.9	26
DP 455 BG/RR	951	26	39.2	14	.	.	66	31	9.4	37	6.3	33	6.899	18	13913	27	24.7	6
DP 164 B2RF	949	27	37.5	30	.	.	64	36	10.3	24	6.4	29	6.767	19	12811	36	20.7	35
ST 4664 RF	942	28	38.9	17	.	.	74	2	10.2	29	6.7	21	6.401	25	14292	21	23.3	15
CG 3520B2RF	922	29	36.8	32	.	.	69	22	10.0	32	6.0	35	6.934	17	13003	35	21.6	31
DP 434 RR	884	30	36.6	33	.	.	71	13	10.7	15	6.3	30	6.327	26	13547	30	21.1	33
ST 4357 B2RF	879	31	37.5	29	.	.	70	16	10.6	17	6.6	25	6.088	31	13834	28	21.8	29
DP 167 RF	865	32	36.0	34	.	.	63	38	11.1	10	6.4	28	6.123	29	12520	38	18.8	37
FM 955B2LL	861	33	35.3	37	.	.	64	36	12.8	2	7.2	14	5.439	36	14044	25	18.3	38
DG 2490 B2RF	855	34	35.7	35	.	.	69	22	10.3	25	5.9	37	6.618	21	15162	14	24.5	8
DG 2520 B2RF	840	35	38.0	23	.	.	74	2	10.3	26	6.5	27	5.854	34	13442	33	21.8	28
CG 4020B2RF	832	36	37.8	24	.	.	71	13	10.1	30	6.3	31	6.014	33	13793	29	22.9	20
DG 2100 B2RF	805	37	35.6	36	.	.	73	8	10.5	20	6.0	36	6.134	28	14398	20	22.9	19
TX-Maroon	605	38	34.1	38	.	.	73	8	14.2	1	7.5	10	3.650	38	16534	6	19.5	36
Mean	1033		38.5		.		70		10.8		6.9		6.777		14771		23.0	
LSD 0.10	163		1.9		.		4		1.1		0.6		1.059		1535		2.9	
C.V.%	13.5		3.1		.		5.2		6.0		4.7		13.3		6.1		7.4	
R-sq x 100	72.8		85.2		.		55.7		84.3		91.2		68.9		84.4		78.5	

Table 13. Fiber properties - 2007 Main Cotton Variety Test at Rohwer, Ark. (irrigated, Desha silt loam).														
Variety	Lint	Q			Fiber properties									
	yield	r	score	r	Mic	r	Len.	r	Unif.	r	Str.	r	Elo.	r
	lb/a						in.		%		g/tex		%	
DP 454 BG/RR	1380	1	50	30	4.9	21	1.10	35	84.9	20	31.6	22	8.1	28
FM 1600 LL	1341	2	58	19	5.1	4	1.15	16	85.2	15	32.0	20	6.6	38
PHY 485 WRF	1329	3	63	15	5.1	4	1.16	12	85.3	12	35.8	2	9.4	10
PHY 480 WR	1270	4	56	22	5.1	4	1.13	21	85.7	3	34.4	8	9.8	5
PHY 425 RF	1249	5	57	21	5.0	9	1.13	24	85.7	3	35.9	1	9.2	14
DP 515 BG/RR	1236	6	58	19	4.8	22	1.13	21	84.7	27	30.1	31	8.5	23
ST 5599 BR	1236	7	61	17	5.0	15	1.14	17	85.5	9	32.0	21	7.6	34
PHY 310 R	1229	8	53	24	5.0	9	1.12	26	85.7	6	33.7	15	9.3	12
DP 117 B2RF	1221	9	52	27	5.1	7	1.12	25	85.0	18	33.8	13	8.4	25
ST 5242 BR	1208	10	51	29	4.8	26	1.11	28	85.0	17	29.6	34	8.8	20
DP 147 RF	1150	11	89	1	4.4	37	1.22	1	85.1	16	30.9	25	8.1	27
FM 958LL	1087	12	66	11	5.2	2	1.17	7	85.7	3	33.8	13	6.7	37
PHY 370 WR	1086	13	48	34	5.1	8	1.11	33	85.0	18	34.0	10	9.0	16
DP 393	1081	14	53	25	5.0	15	1.11	28	85.5	9	34.5	7	9.4	11
DP 445 BG/RR	1078	15	53	25	5.0	9	1.13	21	84.1	33	34.0	10	9.3	12
FM 9068F	1047	16	70	8	4.8	22	1.17	7	85.3	13	32.4	18	7.6	32
DG 2242 B2RF	1001	17	46	35	4.7	29	1.11	28	83.7	38	27.6	38	9.7	8
ST 4554 B2RF	999	18	52	28	4.9	19	1.11	28	84.9	21	35.3	3	10.3	2
CG 3020B2RF	996	19	46	35	4.5	36	1.10	36	84.0	34	27.7	37	10.0	4
DP 143 B2RF	986	20	79	5	4.6	34	1.20	3	84.4	30	32.8	16	8.3	26
ST 5283 RF	982	21	64	14	4.8	22	1.14	17	85.3	13	35.3	4	8.7	21
ST 4427 B2RF	977	22	45	37	5.2	3	1.11	28	84.6	29	31.4	23	8.9	19
FM 9060F	963	23	81	3	4.7	29	1.20	3	84.6	28	30.1	31	7.5	36
FM 9063B2F	963	24	89	1	4.6	33	1.22	2	85.5	11	33.9	12	7.6	32
ST 5327 B2RF	952	25	71	7	5.0	15	1.17	7	85.8	2	35.1	5	9.7	7
DP 455 BG/RR	951	26	65	12	4.7	29	1.15	15	84.2	31	32.1	19	7.6	34
DP 164 B2RF	949	27	67	9	5.0	9	1.17	10	85.6	7	32.6	17	7.9	30
ST 4664 RF	942	28	48	31	5.0	9	1.11	33	84.7	25	34.4	8	10.4	1
CG 3520B2RF	922	29	62	16	4.8	22	1.14	17	84.9	21	30.1	31	9.1	15
DP 434 RR	884	30	48	31	5.0	9	1.12	26	84.0	34	30.6	29	8.7	21
ST 4357 B2RF	879	31	76	6	4.7	28	1.18	6	85.6	8	30.8	26	8.4	24
DP 167 RF	865	32	81	4	5.0	15	1.20	5	86.7	1	34.9	6	7.7	31
FM 955B2LL	861	33	56	22	5.3	1	1.16	12	84.7	25	30.7	28	8.1	28
DG 2490 B2RF	855	34	48	31	4.3	38	1.09	37	83.8	37	30.3	30	10.0	3
DG 2520 B2RF	840	35	67	10	4.9	19	1.17	10	84.8	23	30.8	26	9.7	9
CG 4020B2RF	832	36	60	18	4.8	26	1.14	17	84.2	31	29.0	35	8.9	17
DG 2100 B2RF	805	37	43	38	4.6	35	1.09	38	83.9	36	28.3	36	9.8	5
TX-Maroon	605	38	65	12	4.7	29	1.15	14	84.8	24	31.0	24	8.9	17
Mean	1033		60		4.9		1.14		84.9		32.2		8.7	
LSD 0.10	163		17		0.4		0.04		1.3		2.3		0.8	
C.V.%	13.5		16.7		4.5		2.1		0.7		4.2		5.7	
R-sq x 100	72.8		74.2		67.7		81.1		63.1		86.2		89.0	

Table 14. Two-year average lint yields (lb/a) for varieties at the four locations of the 2006-2007 Arkansas Cotton Variety										
Variety	Keiser Irrigated	r	Judd Hill Irrigated	r	Marianna Irrigated	r	Rohwer Irrigated	r	All loc.	r
	lb/a		lb/a		lb/a		lb/a		lb/a	
DP 454 BG/RR	1190	11	1429	4	1539	9	1454	1	1403	1
PHY 370 WR	1333	4	1483	2	1586	5	1159	12	1390	2
DP 515 BG/RR	1270	7	1352	12	1465	16	1418	2	1376	3
PHY 310 R	1340	3	1221	29	1594	4	1326	4	1370	4
ST 5599 BR	1211	10	1312	16	1598	3	1258	9	1345	5
ST 5242 BR	1158	18	1313	15	1642	2	1236	11	1337	6
DP 117 B2RF	1177	13	1382	7	1508	12	1267	6	1333	7
PHY 485 WRF	1216	9	1353	10	1386	28	1338	3	1323	8
ST 4664 RF	1108	25	1452	3	1655	1	1057	21	1318	9
DP 445 BG/RR	1222	8	1342	13	1572	7	1069	19	1301	10
DP 147 RF	1188	12	1253	25	1475	13	1263	8	1295	11
DP 434 RR	1145	19	1501	1	1516	10	1008	30	1292	12
PHY 425 RF	1171	16	1295	20	1404	26	1275	5	1286	13
PHY 480 WR	1139	21	1285	22	1455	19	1241	10	1280	14
DP 393	1340	2	1238	27	1433	22	1107	15	1279	15
FM 1600 LL	1172	15	1243	26	1435	21	1267	7	1279	16
ST 4427 B2RF	1285	6	1222	28	1579	6	1028	26	1278	17
ST 4554B2RF	1142	20	1370	8	1544	8	1049	23	1276	18
DP 455 BG/RR	1353	1	1293	21	1356	32	1031	25	1258	19
ST 5327 B2RF	1103	26	1330	14	1469	14	1053	22	1238	20
ST 5283 RF	1074	29	1260	24	1512	11	1104	16	1237	21
DP 164 B2RF	1296	5	1207	30	1399	27	1042	24	1236	22
DP 143 B2RF	1174	14	1174	33	1406	24	1141	13	1223	23
CG 3520B2RF	1136	22	1310	19	1467	15	957	33	1217	24
DP 167 RF	1170	17	1279	23	1347	33	1068	20	1216	25
DG 2490 B2RF	1081	27	1311	18	1457	18	1013	29	1215	26
DG 2520 B2RF	1125	23	1385	6	1405	25	938	34	1213	27
ST 4357B2RF	1116	24	1399	5	1367	31	965	32	1212	28
DG 2242 B2RF	1021	34	1311	17	1445	20	1016	28	1198	29
DG 2100 B2RF	1028	32	1362	9	1465	17	930	35	1196	30
FM 9060 F	1022	33	1187	32	1367	30	1131	14	1177	31
CG 4020B2RF	1076	28	1159	34	1422	23	1025	27	1170	32
FM 958LL	1052	30	1154	35	1383	29	1071	18	1165	33
CG 3020B2RF	995	35	1353	11	1314	34	912	37	1143	34
FM 9068 F	969	37	1108	36	1297	35	1102	17	1119	35
FM 9063 B2F	984	36	1195	31	1292	36	975	31	1111	36
FM 955B2LL	1030	31	1080	37	1265	37	916	36	1073	37
Mean	1151		1294		1454		1113		1253	

Table 15. Three-year average lint yields (lb/a) for varieties at four locations of the 2005-2007 Arkansas Cotton Variety										
Variety	Keiser		Judd Hill		Marianna		Rohwer		All	
	Irrigated	r	Irrigated	r	Irrigated	r	Irrigated	r	loc.	r
	lb/a		lb/a		lb/a		lb/a		lb/a	
PHY 370 WR	1276	1	1435	1	1582	2	1365	6	1415	1
PHY 310 R	1272	2	1263	12	1535	3	1455	2	1381	2
DP 454 BG/RR	1154	9	1343	3	1468	10	1454	3	1355	3
DP 515 BG/RR	1162	7	1327	4	1440	14	1483	1	1353	4
DP 445 BG/RR	1160	8	1314	5	1530	4	1316	12	1330	5
ST 5599 BR	1167	6	1257	16	1505	7	1389	4	1329	6
DP 393	1256	3	1255	18	1452	12	1342	10	1326	7
ST 4664 RF	1107	14	1293	8	1613	1	1278	15	1323	8
ST 5242 BR	1133	10	1263	13	1530	5	1359	7	1321	9
DP 434 RR	1106	15	1392	2	1500	8	1218	19	1304	10
DP 117 B2RF	1089	17	1258	15	1478	9	1342	9	1292	11
ST 4554B2RF	1132	11	1257	17	1526	6	1225	18	1285	12
PHY 425 RF	1112	12	1241	20	1397	20	1375	5	1281	13
DP 455 BG/RR	1254	4	1203	22	1365	25	1286	14	1277	14
DP 147 RF	1099	16	1182	24	1445	13	1347	8	1268	15
PHY 480 WR	1069	20	1234	21	1402	19	1335	11	1260	16
DP 164 B2RF	1191	5	1200	23	1395	21	1250	17	1259	17
DG 2520 B2RF	1083	18	1294	7	1420	18	1198	20	1249	18
DP 167 RF	1108	13	1266	11	1352	26	1254	16	1245	19
CG 3520B2RF	1066	21	1268	10	1462	11	1165	26	1240	20
ST 4357B2RF	1077	19	1298	6	1388	22	1197	21	1240	21
DP 143 B2RF	1048	23	1171	25	1370	23	1300	13	1222	22
DG 2100 B2RF	1018	25	1263	14	1431	17	1175	25	1222	24
DG 2242 B2RF	1009	26	1247	19	1437	15	1193	24	1222	23
CG 4020B2RF	1064	22	1162	26	1433	16	1194	23	1213	25
CG 3020B2RF	994	28	1278	9	1337	27	1138	27	1187	26
FM 958LL	1003	27	1117	27	1370	24	1195	22	1171	27
FM 955B2LL	1040	24	1085	28	1296	28	1107	28	1132	28
Mean	1116		1256		1445		1283		1275	

Table 16. Yield and related properties - 2007 1st-year Cotton Variety Test across four Arkansas test sites.

Variety	Lint yield lb/a	r	Lint frac. %	r	Ht. cm	r	Open bolls %	r	Seed index g	r	Lint index g	r	Seed per a mil.	r	Fibers/ seed no.	r	Fiber den. no.	r
PHX3702	1535	1	43.2	6	109	12	68	18	9.7	33	7.6	10	9.399	1	18857	3	32.6	1
DP 117 B2RF, ck	1514	2	42.3	11	108	15	64	30	10.1	13	7.6	9	8.659	23	16735	14	27.7	13
PHX3709	1503	3	43.3	4	112	7	68	14	9.9	29	7.8	7	8.571	27	17354	10	29.4	9
PHX3701	1496	4	42.6	8	110	9	68	14	9.9	27	7.6	11	9.251	5	18191	4	30.7	3
DP 174 RF	1472	5	44.0	1	116	2	64	31	9.9	26	8.0	3	8.503	29	17963	6	30.2	6
PHY 315 RF	1472	6	43.6	3	104	22	69	12	9.9	30	7.8	6	8.750	19	18904	2	32.0	2
PHY 370 WR, ck	1470	7	41.8	14	109	10	71	2	10.0	18	7.4	15	9.156	7	16917	13	28.3	12
AM 1550 B2RF	1454	8	41.8	15	101	33	68	13	10.2	12	7.5	13	9.371	2	17308	11	28.6	11
Dyna-Gro 2570 B2RF	1443	9	42.2	12	113	5	65	28	10.4	9	7.8	8	8.894	17	16586	16	26.7	20
PHX4762	1438	10	41.2	17	113	3	68	14	9.6	34	7.0	22	9.367	3	14937	31	25.9	24
Dyna-Gro 2400 RF	1431	11	44.0	2	113	4	64	31	10.1	16	8.1	2	8.020	33	17908	7	29.8	8
PHY 375 WRF	1408	12	43.1	7	103	24	71	5	10.0	20	7.8	5	8.457	30	17887	8	29.9	7
PHX3703	1408	13	42.4	10	103	26	69	9	9.9	28	7.5	12	8.443	31	18131	5	30.7	4
ST 4678 B2RF	1404	14	38.7	31	104	21	66	24	10.9	4	7.1	16	8.929	16	14863	32	22.8	37
AMX 511345 B2RF	1375	15	40.4	19	109	11	65	28	10.0	22	7.0	19	8.893	18	14617	36	24.5	31
CG 3220 B2RF	1372	16	41.2	16	103	27	71	2	10.3	11	7.4	14	8.650	24	16645	15	27.0	17
CG 3035 RF	1365	17	43.3	5	104	20	67	20	10.0	17	7.9	4	7.737	35	17551	9	29.3	10
ST 4554 B2RF, ck	1353	18	40.4	18	102	28	66	24	10.0	23	7.0	20	8.967	14	15513	21	26.2	23
PHX4727	1352	19	39.4	25	101	32	70	7	10.0	25	6.7	31	8.966	15	14820	33	24.8	29
AM 1532 B2RF	1351	20	40.3	20	107	16	69	9	10.0	21	7.0	18	8.405	32	16013	17	26.8	18
ST 4596 B2RF	1349	21	39.3	27	102	30	62	36	10.4	8	6.9	23	9.082	9	14648	35	23.5	34
DP 121 RF	1348	22	41.9	13	108	14	69	9	9.4	36	7.0	17	9.135	8	15316	25	27.1	16
ST 4498 B2RF	1345	23	40.2	21	96	36	67	20	9.6	35	6.6	32	8.977	13	15376	24	27.3	15
AMX 511353 B2RF	1340	24	39.2	28	103	24	67	22	10.1	14	6.7	30	9.356	4	15308	26	25.4	26
AMX 511370 B2RF	1291	25	39.7	23	104	19	68	18	10.0	19	6.8	24	9.056	10	14764	34	24.7	30
Dyna-Gro 2383 RF	1286	26	39.4	26	105	18	71	5	10.0	24	6.7	29	9.025	11	15961	18	26.7	19
DP 161 B2RF	1271	27	39.2	29	118	1	55	37	9.4	37	6.2	38	9.003	12	13036	38	23.3	35
ST 5458 B2RF	1264	28	37.5	36	103	23	65	26	10.9	2	6.7	27	8.631	26	15451	23	23.7	33
ST 6351 B2RF	1245	29	37.8	35	101	31	65	26	11.2	1	7.0	21	8.715	21	15157	28	22.6	38
DP 141 B2RF	1241	30	39.6	24	113	6	52	38	9.2	38	6.2	37	9.185	6	13936	37	25.3	27
AM 1504 B2RF	1239	31	38.7	32	96	37	71	2	10.3	10	6.7	28	8.717	20	17040	12	27.6	14
FM 1735 LLB2	1207	32	38.7	33	106	17	70	8	10.5	7	6.8	25	7.898	34	15886	19	25.4	25
FMX 4330 B2F	1200	33	42.6	9	96	35	67	22	10.7	6	8.1	1	6.895	38	19196	1	30.2	5
AMX 110118 B2RF	1183	34	38.2	34	109	13	63	33	10.1	15	6.4	35	8.690	22	15097	30	25.2	28
AM 1664 B2RF	1176	35	38.8	30	101	34	73	1	9.8	32	6.4	36	8.638	25	15486	22	26.4	21
AM 1622 B2RF	1173	36	37.0	38	102	29	68	14	10.9	3	6.6	33	8.523	28	15101	29	23.2	36
FMX 4327 B2F	1150	37	40.1	22	87	38	62	34	9.8	31	6.8	26	7.387	36	15272	27	26.2	22
FM 1880 B2F	986	38	37.2	37	110	8	62	35	10.8	5	6.6	34	7.165	37	15623	20	24.4	32
Mean	1340		40.6		105		66		10.1		7.1		8.670		16199		26.9	
Var. LSD 0.10	80		0.8		7		4		0.4		0.3		0.717		703		1.4	
Loc. LSD 0.10	26		0.3		2		1		0.1		0.1		0.163		226		0.5	
C.V.%	10.3		2.3		10.0		9.8		4.2		4.6		10.0		5.2		6.5	
R-sq x 100	78.1		93.2		74.3		59.4		85.4		90.3		81.2		91.2		91.5	
Prob (var x loc)	<0.001		<0.001		0.447		<0.001		0.037		<0.001		<0.001		0.034		0.068	

Table 17. Fiber properties - 2007 1st-year Cotton Variety Test across four Arkansas test sites.														
Variety	Lint		Q		Fiber properties									
	yield	r	score	r	Mic		Len.		Unif.	r	Str.	r	Elo.	r
	lb/a						in.		%		g/tex		%	
PHX3702	1535	1	56	30	4.3	36	1.13	26	83.7	37	28.7	30	8.4	30
DP 117 B2RF, ck	1514	2	51	34	4.9	2	1.13	29	83.6	38	29.9	23	8.4	32
PHX3709	1503	3	53	32	4.8	9	1.11	34	84.7	15	30.0	22	9.1	16
PHX3701	1496	4	62	16	4.4	32	1.14	16	84.2	28	29.4	27	8.1	35
DP 174 RF	1472	5	66	13	4.6	19	1.16	10	84.5	22	28.1	34	8.9	22
PHY 315 RF	1472	6	52	33	4.5	27	1.12	33	83.9	35	27.9	35	8.6	28
PHY 370 WR, ck	1470	7	48	36	4.8	13	1.10	37	84.3	25	30.4	19	8.8	23
AM 1550 B2RF	1454	8	46	38	4.7	15	1.10	36	84.0	33	27.0	38	8.9	20
Dyna-Gro 2570 B2RF	1443	9	61	18	4.9	3	1.14	18	85.2	4	30.8	15	9.9	6
PHX4762	1438	10	65	14	4.8	10	1.15	14	85.2	5	31.9	5	9.9	9
Dyna-Gro 2400 RF	1431	11	57	29	4.8	12	1.12	30	84.9	10	31.1	9	10.1	5
PHY 375 WRF	1408	12	59	23	4.6	18	1.13	24	84.6	20	29.0	29	8.6	26
PHX3703	1408	13	58	25	4.4	30	1.12	31	84.2	27	29.4	26	8.6	27
ST 4678 B2RF	1404	14	66	11	4.8	4	1.15	12	85.5	2	31.3	7	9.0	18
AMX 511345 B2RF	1375	15	49	35	5.0	1	1.11	34	85.1	7	31.1	11	9.0	19
CG 3220 B2RF	1372	16	58	26	4.7	14	1.13	21	84.6	21	29.8	24	9.9	7
CG 3035 RF	1365	17	54	31	4.8	11	1.12	32	84.7	16	30.3	20	10.2	4
ST 4554 B2RF, ck	1353	18	60	19	4.7	16	1.13	21	84.8	13	32.6	4	10.4	1
PHX4727	1352	19	72	3	4.6	20	1.16	8	85.4	3	33.9	1	9.9	8
AM 1532 B2RF	1351	20	67	9	4.5	24	1.15	11	84.7	17	28.3	33	9.1	15
ST 4596 B2RF	1349	21	68	8	4.8	6	1.16	5	85.0	9	33.1	2	10.4	2
DP 121 RF	1348	22	57	27	4.8	8	1.13	24	84.4	24	30.9	14	9.4	11
ST 4498 B2RF	1345	23	60	20	4.4	31	1.14	20	84.6	19	32.8	3	10.2	3
AMX 511353 B2RF	1340	24	67	9	4.5	22	1.15	15	85.2	6	30.6	16	8.6	25
AMX 511370 B2RF	1291	25	57	28	4.8	6	1.13	27	84.9	12	31.4	6	9.2	13
Dyna-Gro 2383 RF	1286	26	59	22	4.4	29	1.13	27	84.5	23	30.6	17	8.2	33
DP 161 B2RF	1271	27	69	6	4.8	5	1.18	3	84.7	14	30.9	13	8.5	29
ST 5458 B2RF	1264	28	68	7	4.5	24	1.16	6	84.2	29	29.8	25	8.9	21
ST 6351 B2RF	1245	29	72	4	4.7	17	1.17	4	84.9	11	31.1	8	9.0	17
DP 141 B2RF	1241	30	80	2	4.5	27	1.20	1	84.3	26	31.1	10	8.4	31
AM 1504 B2RF	1239	31	46	37	4.3	37	1.10	38	84.1	30	27.7	37	9.7	10
FM 1735 LLB2	1207	32	60	21	4.5	26	1.14	19	84.7	18	28.4	31	7.5	37
FMX 4330 B2F	1200	33	69	5	4.4	34	1.15	13	85.1	8	30.1	21	7.6	36
AMX 110118 B2RF	1183	34	58	24	4.5	23	1.13	21	83.9	34	28.4	32	8.8	24
AM 1664 B2RF	1176	35	61	17	4.3	35	1.14	17	84.0	32	27.9	36	9.4	12
AM 1622 B2RF	1173	36	83	1	4.3	38	1.19	2	85.8	1	30.5	18	9.1	14
FMX 4327 B2F	1150	37	65	15	4.6	21	1.16	9	83.7	36	29.0	28	7.0	38
FM 1880 B2F	986	38	66	11	4.4	33	1.16	7	84.0	31	31.1	12	8.2	33
Mean	1340		61		4.6		1.14		84.6		30.1		9.0	
Var. LSD 0.10	80		7		0.2		0.02		0.6		1.0		0.2	
Loc. LSD 0.10	26		2		0.1		ns		0.2		0.3		ns	
C.V.%	10.3		13.1		4.8		1.6		0.8		4.1		.3	
R-sq x 100	78.1		76.7		88.0		82.4		68.7		86.9		94.6	
Prob (var x loc)	<0.001		0.201		0.149		0.050		0.186		0.346		0.001	

Table 18. Yield and related properties - 2007 1st-year Cotton Variety Test at Keiser, Ark. (irrigated, Sharkey silty clay).

Variety	Lint yield	r	Lint frac.	r	Ht.	r	Open bolls	r	Seed index	r	Lint index	r	Seed per a	r	Fibers/ seed	r	Fiber den.	r
	lb/a		%		cm		%		g		g		mil.		no.		no.	
PHX3709	1527	1	43.8	3	91	9	71	12	9.0	27	7.2	8	8.776	28	17786	12	33.1	10
Dyna-Gro 2570 B2RF	1520	2	42.3	12	93	5	70	16	9.7	10	7.4	6	9.762	13	17288	17	29.6	22
DP 174 RF	1517	3	45.2	1	99	2	64	34	9.3	19	7.9	1	8.735	29	19061	4	34.1	4
CG 3035 RF	1517	4	42.9	7	90	11	65	33	9.4	15	7.3	7	9.274	22	18712	7	33.1	9
PHY 370 WR, ck	1509	5	42.3	13	92	8	71	12	9.0	27	6.8	16	10.100	9	17307	16	32.4	13
Dyna-Gro 2400 RF	1504	6	44.3	2	93	7	66	31	9.4	17	7.7	2	9.247	23	18612	8	33.2	8
PHX4762	1497	7	41.4	16	89	16	69	23	9.5	14	6.9	13	11.000	2	15922	25	28.0	30
AMX 511370 B2RF	1475	8	40.4	21	86	27	70	16	8.9	29	6.2	30	10.590	4	14879	35	27.8	31
DP 161 B2RF	1459	9	41.0	20	101	1	59	37	8.8	32	6.3	28	10.380	6	14368	38	27.2	32
PHY 315 RF	1458	10	43.7	4	87	20	74	6	9.3	18	7.5	5	9.283	21	19419	3	34.7	2
PHX3703	1457	11	42.7	8	80	35	70	16	9.3	21	7.1	11	10.090	10	18942	5	34.2	3
PHX4727	1440	12	39.3	29	89	14	70	16	9.9	7	6.6	22	10.030	12	14678	37	24.7	36
PHX3702	1429	13	43.0	6	86	24	73	9	8.9	31	7.0	12	9.382	18	20644	1	38.8	1
AMX 511345 B2RF	1420	14	41.1	18	90	11	70	16	8.7	34	6.3	29	10.390	5	14704	36	28.1	29
Dyna-Gro 2383 RF	1415	15	39.7	25	93	5	69	23	9.7	11	6.6	21	10.320	7	16948	18	29.2	24
AM 1622 B2RF	1408	16	38.1	35	81	34	70	16	10.5	3	6.7	19	11.480	1	16033	23	25.5	34
DP 121 RF	1396	17	42.4	10	97	3	71	12	8.7	35	6.6	20	10.160	8	15755	28	30.1	21
AM 1550 B2RF	1383	18	42.7	9	85	28	76	2	8.9	30	6.8	14	9.663	16	17324	15	32.4	12
PHX3701	1381	19	42.2	14	94	4	70	16	9.1	24	6.8	15	9.318	20	18300	10	33.5	5
ST 4596 B2RF	1379	20	39.4	27	89	18	60	36	9.8	9	6.6	23	9.758	14	15135	33	25.6	33
AMX 511353 B2RF	1367	21	40.0	24	77	36	69	23	9.2	23	6.3	27	10.680	3	16044	22	29.0	26
CG 3220 B2RF	1350	22	41.0	19	87	21	75	4	10.0	5	7.1	9	8.918	26	18444	9	30.8	15
PHY 375 WRF	1347	23	43.5	5	88	19	74	6	9.5	13	7.5	3	9.707	15	18934	6	33.3	7
DP 141 B2RF	1320	24	40.1	23	90	13	55	38	8.4	38	5.8	36	10.030	11	15239	32	30.2	20
ST 5458 B2RF	1288	25	37.7	37	82	32	69	23	10.4	4	6.5	24	8.725	30	15564	30	25.0	35
ST 4554 B2RF, ck	1281	26	41.4	17	87	21	69	23	8.7	33	6.4	26	9.334	19	16279	20	31.1	14
ST 4678 B2RF	1257	27	38.4	33	86	26	73	9	10.5	2	6.7	18	7.904	33	15423	31	24.6	37
AM 1532 B2RF	1254	28	40.3	22	81	33	74	6	9.2	22	6.4	25	8.829	27	16769	19	30.2	17
ST 4498 B2RF	1221	29	39.1	31	84	29	71	12	8.6	36	5.7	38	9.412	17	15897	26	30.7	16
ST 6351 B2RF	1215	30	38.9	32	83	30	73	9	10.9	1	7.1	10	9.119	24	15612	29	23.8	38
DP 117 B2RF, ck	1215	31	42.1	15	87	23	68	30	9.0	26	6.8	17	7.214	37	17642	13	32.7	11
AMX 110118 B2RF	1148	32	39.3	28	89	15	66	31	9.1	24	6.1	33	8.579	31	16024	24	29.5	23
AM 1664 B2RF	1109	33	39.2	30	86	25	78	1	9.3	20	6.2	31	8.964	25	15783	27	28.3	28
FM 1735 LLB2	1099	34	38.3	34	89	17	76	2	9.4	16	6.0	34	7.881	34	16046	21	28.4	27
AM 1504 B2RF	1072	35	37.4	38	76	37	75	4	10.0	6	6.1	32	8.212	32	18026	11	30.2	19
FMX 4327 B2F	1037	36	39.4	26	75	38	63	35	8.6	37	5.8	37	7.624	36	15002	34	29.1	25
FMX 4330 B2F	1029	37	42.4	11	83	31	69	23	9.8	8	7.5	4	6.621	38	19706	2	33.4	6
FM 1880 B2F	973	38	37.8	36	91	10	69	23	9.6	12	6.0	35	7.815	35	17353	14	30.2	18
Mean	1334		40.9		87		69		9.4		6.7		9.298		16884		30.2	
LSD 0.10	148		1.4		8		5		0.7		0.5		1.316		1645		4.0	
C.V.%	9.4		2.0		8.2		6.3		4.3		4.8		8.4		5.8		7.9	
R-sq x 100	70.2		92.5		49.6		62.9		80.9		85.7		80.8		85.0		79.2	

Table 19. Fiber properties - 2007 1st-year Cotton Variety Test with irrigation on a Tunica silty clay soil at Keiser, Ark..														
Variety	Lint		Q		Fiber properties									
	yield	r	score	r	Mic	r	Len.	r	Unif.	r	Str.	r	Elo.	r
	lb/a						in.		%		g/tex		%	
PHX3709	1527	1	50	36	4.4	5	1.10	38	83.9	30	28.5	27	9.1	14
Dyna-Gro 2570 B2RF	1520	2	64	19	4.4	5	1.15	25	84.5	16	29.9	15	9.5	8
DP 174 RF	1517	3	70	9	4.2	16	1.17	8	84.6	13	27.5	34	8.9	18
CG 3035 RF	1517	4	58	30	4.1	18	1.13	28	84.0	28	28.9	22	9.9	4
PHY 370 WR, ck	1509	5	53	33	4.2	15	1.11	35	84.4	20	29.5	19	8.7	23
Dyna-Gro 2400 RF	1504	6	61	25	4.3	11	1.13	28	84.7	11	29.2	21	9.7	5
PHX4762	1497	7	67	12	4.5	4	1.15	20	85.0	8	31.5	6	9.5	10
AMX 511370 B2RF	1475	8	63	21	4.4	8	1.14	26	85.1	7	30.0	14	9.0	15
DP 161 B2RF	1459	9	72	8	4.4	5	1.19	2	84.4	19	30.7	10	8.3	26
PHY 315 RF	1458	10	60	26	4.0	25	1.15	20	83.8	33	27.6	31	8.2	30
PHX3703	1457	11	59	29	4.0	29	1.13	28	84.2	23	28.5	27	8.2	30
PHX4727	1440	12	77	4	4.5	2	1.17	8	85.8	4	34.9	1	9.7	5
PHX3702	1429	13	39	38	3.7	36	1.13	33	82.4	38	26.4	38	8.3	26
AMX 511345 B2RF	1420	14	57	31	4.5	2	1.11	35	85.5	6	31.2	8	8.9	17
Dyna-Gro 2383 RF	1415	15	67	14	4.0	25	1.15	20	84.8	9	31.4	7	8.0	34
AM 1622 B2RF	1408	16	81	1	4.1	22	1.19	2	86.1	2	30.2	12	8.9	18
DP 121 RF	1396	17	65	17	4.4	8	1.15	20	84.4	20	29.5	16	9.7	7
AM 1550 B2RF	1383	18	47	37	4.3	13	1.11	37	84.2	23	26.4	37	9.0	15
PHX3701	1381	19	65	18	3.9	31	1.16	14	83.7	34	28.8	24	7.9	35
ST 4596 B2RF	1379	20	75	7	4.4	8	1.18	5	84.8	10	32.3	3	10.4	2
AMX 511353 B2RF	1367	21	67	14	4.1	22	1.16	15	84.5	17	29.5	16	8.5	25
CG 3220 B2RF	1350	22	63	22	4.0	25	1.16	15	84.6	13	27.6	33	9.3	11
PHY 375 WRF	1347	23	66	16	4.1	18	1.16	15	84.1	26	28.6	26	8.2	28
DP 141 B2RF	1320	24	81	1	3.8	33	1.22	1	83.9	30	30.1	13	8.1	33
ST 5458 B2RF	1288	25	68	10	4.3	13	1.17	12	83.9	30	28.8	25	8.8	20
ST 4554 B2RF, ck	1281	26	60	26	4.1	18	1.13	28	84.7	12	31.8	4	10.6	1
ST 4678 B2RF	1257	27	81	3	4.3	11	1.19	4	86.3	1	31.0	9	9.3	11
AM 1532 B2RF	1254	28	67	12	3.9	30	1.17	8	84.2	25	27.0	36	8.7	21
ST 4498 B2RF	1221	29	62	24	3.7	35	1.16	15	84.4	20	32.4	2	9.9	3
ST 6351 B2RF	1215	30	76	6	4.6	1	1.18	7	85.5	5	30.6	11	8.7	22
DP 117 B2RF, ck	1215	31	56	32	4.1	17	1.13	28	83.3	37	29.3	20	8.2	30
AMX 110118 B2RF	1148	32	53	33	4.1	21	1.13	33	83.9	29	27.5	35	8.6	24
AM 1664 B2RF	1109	33	64	20	4.1	22	1.15	20	84.1	26	28.1	29	9.2	13
FM 1735 LLB2	1099	34	68	10	3.9	31	1.17	12	84.4	18	28.9	22	7.4	36
AM 1504 B2RF	1072	35	52	35	3.6	38	1.14	27	84.6	13	27.6	31	9.5	8
FMX 4327 B2F	1037	36	63	22	4.0	25	1.16	15	83.6	35	27.8	30	6.4	38
FMX 4330 B2F	1029	37	77	4	3.8	33	1.18	5	86.1	2	31.7	5	7.4	36
FM 1880 B2F	973	38	60	28	3.6	37	1.17	8	83.5	36	29.5	16	8.2	28
Mean	1334		64		4.1		1.15		84.4		29.5		8.8	
LSD 0.10	148		11		0.4		0.03		1.0		1.8		0.4	
C.V.%	9.4		10.4		6.4		1.3		0.7		3.6		3.0	
R-sq x 100	70.2		80.5		68.9		86.8		79.2		86.0		95.5	

Variety	Lint yield lb/a	r	Lint frac. %	r	Ht. cm	r	Open bolls %	r	Seed index g	r	Lint index g	r	Seed per a mil.	r	Fibers/ seed no.	r	Fiber den. no.	r
DP 117 B2RF, ck	1715	1	41.7	16	122	6	58	30	10.9	5	8.0	11	9.956	2	16573	14	25.4	19
PHX3702	1697	2	44.2	5	126	3	59	25	10.4	13	8.4	3	9.423	6	18505	2	29.8	5
PHY 315 RF	1680	3	43.8	7	112	22	59	25	10.2	21	8.1	9	8.939	14	18809	1	30.7	2
AM 1550 B2RF	1675	4	42.4	13	110	25	60	18	10.7	7	8.0	10	9.824	4	17931	5	28.0	10
PHX3701	1648	5	43.6	9	113	20	60	18	10.3	16	8.2	6	9.371	7	17721	9	28.6	7
PHY 370 WR, ck	1615	6	42.9	11	115	16	63	6	10.2	19	7.9	14	8.936	15	16919	12	27.6	12
CG 3220 B2RF	1600	7	42.7	12	110	26	63	6	10.3	15	7.9	12	9.247	11	16659	13	26.8	15
PHY 375 WRF	1566	8	44.5	4	109	29	68	1	9.9	31	8.2	7	8.130	25	17963	4	30.4	3
ST 4596 B2RF	1529	9	39.9	25	108	32	60	18	10.7	6	7.3	17	10.490	1	14927	26	23.3	29
AM 1532 B2RF	1524	10	41.5	18	117	14	61	12	9.9	28	7.2	18	8.670	20	16354	16	27.5	13
PHX3709	1524	11	44.7	2	123	4	63	6	10.2	22	8.5	1	7.460	36	17750	8	29.0	6
Dyna-Gro 2570 B2RF	1505	12	43.7	8	119	9	58	30	10.3	18	8.1	8	8.235	23	16511	15	26.9	14
PHX3703	1502	13	43.0	10	117	13	60	18	9.8	34	7.7	15	8.010	29	18436	3	31.5	1
PHX4762	1500	14	41.2	20	132	1	58	30	10.0	27	7.2	21	9.948	3	14456	29	24.2	26
ST 4554 B2RF, ck	1497	15	41.6	17	114	19	56	33	10.5	10	7.6	16	8.789	17	15650	18	25.0	21
DP 174 RF	1490	16	44.0	6	129	2	56	33	10.3	17	8.3	5	7.871	32	17383	10	28.1	9
AM 1504 B2RF	1473	17	40.7	21	109	27	65	3	10.0	26	7.0	24	9.327	8	15819	17	26.5	16
Dyna-Gro 2400 RF	1459	18	44.6	3	115	17	60	18	10.1	24	8.3	4	8.100	26	17362	11	28.6	8
CG 3035 RF	1457	19	45.2	1	111	23	60	18	9.9	30	8.4	2	7.805	33	17851	6	30.1	4
ST 4498 B2RF	1449	20	41.4	19	99	37	63	6	9.9	32	7.1	22	8.658	21				
ST 4678 B2RF	1431	21	39.8	27	111	24	61	12	10.6	9	7.2	20	9.282	10	14259	32	22.4	33
FMX 4330 B2F	1333	22	41.9	15	103	35	61	12	10.6	8	7.9	13	7.933	30	17771	7	27.8	11
ST 5458 B2RF	1331	23	37.1	37	118	11	56	33	11.3	1	6.8	28	9.297	9	14384	31	21.2	37
DP 121 RF	1328	24	42.3	14	109	30	64	5	9.2	37	6.9	26	9.144	12	14544	28	26.4	17
DP 161 B2RF	1328	25	39.2	30	119	9	56	33	9.7	35	6.4	37	8.770	18	12554	37	21.5	34
AM 1664 B2RF	1317	26	39.6	28	103	34	68	1	9.7	36	6.5	35	9.033	13	15305	21	26.4	18
DP 141 B2RF	1306	27	39.1	31	123	4	56	33	9.2	38	6.1	38	9.511	5	12935	36	23.5	28
AMX 110118 B2RF	1288	28	38.8	33	115	18	61	12	10.4	11	6.8	29	8.618	22	15417	20	24.6	23
AMX 511370 B2RF	1286	29	40.2	23	108	31	63	6	10.4	12	7.2	19	8.889	16	15038	24	24.1	27
PHX4727	1276	30	39.5	29	109	28	59	25	9.9	33	6.7	34	7.912	31	13774	35	23.2	32
ST 6351 B2RF	1263	31	37.2	36	102	36	60	18	11.0	4	6.7	33	8.029	28	14213	33	21.5	35
AMX 511353 B2RF	1262	32	39.1	32	113	21	59	25	10.2	20	6.7	32	7.603	35	14890	27	24.3	25
AMX 511345 B2RF	1262	33	40.7	22	122	6	59	25	10.1	24	7.1	23	7.306	38	14122	34	23.3	31
FM 1735 LLB2	1257	34	38.8	34	118	12	63	6	10.4	14	6.7	31	8.132	24	15106	23	24.3	24
AM 1622 B2RF	1211	35	36.1	38	117	14	61	12	11.2	2	6.4	36	8.759	19	14392	30	21.5	36
FMX 4327 B2F	1183	36	40.1	24	88	38	61	12	9.9	29	6.8	27	7.412	37	15122	22	25.4	20
Dyna-Gro 2383 RF	1168	37	39.9	26	107	33	65	3	10.2	23	6.9	25	7.666	34	15030	25	24.6	22
FM 1880 B2F	1153	38	37.6	35	121	8	56	33	11.0	3	6.8	30	8.056	27	15435	19	23.3	30
Mean	1423		41.2		114		60		10.2		7.4		8.646		15888		25.9	
LSD 0.10	163		1.7		13		5		0.6		0.5		1.446		1278		2.2	
C.V.%	9.8		2.4		10.1		7.1		3.4		4.2		9.9		4.8		4.9	
R-sq x 100	68.5		91.9		53.9		52.9		78.9		91.1		71.4		90.6		91.0	

Table 21. Fiber properties - 2007 1st-year Cotton Variety Test with irrigation on a Dundee silt loam soil at Judd Hill, Ark..														
Variety	Lint		Q		Fiber properties									
	yield	r	score	r	Mic	r	Len.	r	Unif.	r	Str.	r	Elo.	r
	lb/a						in.		%		g/tex		%	
DP 117 B2RF, ck	1715	1	46	34	5.2	2	1.12	24	83.2	37	29.6	23	8.2	30
PHX3702	1697	2	59	19	4.8	23	1.13	16	83.7	33	29.0	27	8.4	26
PHY 315 RF	1680	3	52	28	4.7	31	1.11	28	84.5	23	27.8	34	8.9	17
AM 1550 B2RF	1675	4	54	26	4.8	22	1.11	28	84.4	25	27.7	35	8.9	17
PHX3701	1648	5	65	11	4.8	23	1.14	11	84.6	20	28.9	28	8.1	31
PHY 370 WR, ck	1615	6	47	33	5.1	10	1.09	34	84.9	13	30.3	19	8.6	23
CG 3220 B2RF	1600	7	60	17	5.0	15	1.13	16	84.9	10	29.7	22	10.1	4
PHY 375 WRF	1566	8	50	30	4.9	17	1.10	31	84.6	20	28.0	31	8.7	19
ST 4596 B2RF	1529	9	63	13	5.0	11	1.14	11	85.3	5	32.8	3	10.4	1
AM 1532 B2RF	1524	10	71	6	4.6	34	1.15	8	85.0	9	28.2	29	9.4	9
PHX3709	1524	11	51	29	5.1	5	1.11	26	84.8	17	30.8	14	8.7	19
Dyna-Gro 2570 B2RF	1505	12	56	22	5.2	3	1.12	22	85.8	1	30.2	20	10.1	5
PHX3703	1502	13	56	23	4.5	35	1.10	31	84.1	31	29.0	26	8.0	33
PHX4762	1500	14	65	10	5.1	9	1.15	6	85.3	5	32.2	5	10.1	5
ST 4554 B2RF, ck	1497	15	56	23	5.1	7	1.13	19	84.9	13	33.2	2	10.2	2
DP 174 RF	1490	16	58	20	5.0	15	1.14	11	84.7	18	27.9	32	8.3	29
AM 1504 B2RF	1473	17	45	35	4.9	20	1.09	37	84.4	28	27.4	36	9.5	8
Dyna-Gro 2400 RF	1459	18	60	17	5.0	11	1.13	19	85.6	4	31.4	9	10.0	7
CG 3035 RF	1457	19	45	35	5.1	7	1.09	34	84.7	18	29.4	25	10.2	2
ST 4498 B2RF	1449	20												
ST 4678 B2RF	1431	21	62	15	5.2	3	1.15	8	85.3	7	32.5	4	8.5	25
FMX 4330 B2F	1333	22	64	12	4.7	31	1.13	16	84.8	16	29.4	24	7.2	36
ST 5458 B2RF	1331	23	73	5	4.8	23	1.17	4	84.3	30	30.5	17	9.2	13
DP 121 RF	1328	24	49	31	5.1	5	1.11	28	84.4	25	31.5	8	9.2	14
DP 161 B2RF	1328	25	80	2	5.0	11	1.20	1	85.7	2	32.2	5	8.3	27
AM 1664 B2RF	1317	26	67	7	4.5	36	1.14	15	84.6	20	27.9	32	9.4	9
DP 141 B2RF	1306	27	75	4	4.8	27	1.18	3	83.6	34	30.7	16	8.3	27
AMX 110118 B2RF	1288	28	54	26	4.8	27	1.11	26	83.6	35	28.1	30	8.7	22
AMX 511370 B2RF	1286	29	58	21	5.0	11	1.13	19	84.9	10	31.2	11	9.1	15
PHX4727	1276	30	76	3	4.9	21	1.17	5	85.6	3	35.3	1	9.4	9
ST 6351 B2RF	1263	31	63	14	4.9	17	1.14	11	84.5	23	30.8	14	8.7	19
AMX 511353 B2RF	1262	32	61	16	4.8	27	1.12	22	84.9	10	30.9	13	8.6	23
AMX 511345 B2RF	1262	33	39	37	5.5	1	1.09	34	84.9	13	31.9	7	9.0	16
FM 1735 LLB2	1257	34	49	31	4.8	23	1.10	31	84.4	28	26.9	37	7.3	35
AM 1622 B2RF	1211	35	86	1	4.4	37	1.20	1	85.3	7	30.4	18	9.3	12
FMX 4327 B2F	1183	36	67	7	4.7	30	1.15	6	83.5	36	30.1	21	7.2	36
Dyna-Gro 2383 RF	1168	37	55	25	4.9	17	1.12	24	84.4	25	31.3	10	8.1	31
FM 1880 B2F	1153	38	66	9	4.6	33	1.15	8	83.8	32	31.0	12	8.0	34
Mean	1423		59		4.9		1.13		84.6		30.1		8.8	
LSD 0.10	163		12		0.3		0.03		0.9		2.0		0.5	
C.V.%	9.8		12.3		3.8		1.6		0.6		4.0		3.5	
R-sq x 100	68.5		80.7		75.0		83.5		72.7		82.9		93.9	

Table 22. Yield and related properties - 2007 1st-year Cotton Variety Test at Marianna, Ark. (irrigated, Callaway silt loam).

Variety	Lint yield lb/a	r	Lint frac. %	r	Ht. cm	r	Open bolls %	r	Seed index g	r	Lint index g	r	Seed per a mil.	r	Fibers/ seed no.	r	Fiber den. no.	r
DP 117 B2RF, ck	1763	1	43.2	12	114	20	60	34	10.5	10	8.2	5	9.766	10	17405	17	27.8	24
PHX3702	1759	2	44.4	3	115	19	68	23	9.6	35	7.9	12	10.550	4	19671	3	34.3	2
PHX3709	1729	3	43.7	6	120	10	66	26	10.2	19	8.1	7	9.640	13	18141	13	29.7	12
Dyna-Gro 2570 B2RF	1706	4	43.6	9	126	3	63	31	10.8	2	8.5	2	10.580	3	17119	20	26.5	27
ST 4498 B2RF	1689	5	42.4	17	107	33	65	28	9.7	31	7.3	21	10.760	2	16895	21	29.0	17
AM 1550 B2RF	1662	6	43.2	13	108	31	70	19	10.1	21	7.9	11	10.290	6	18643	9	30.7	11
Dyna-Gro 2400 RF	1659	7	45.7	1	131	2	59	36	10.0	24	8.7	1	8.602	30	19548	5	32.5	4
CG 3220 B2RF	1631	8	43.1	15	112	24	71	11	10.5	9	8.2	6	9.522	15	17563	15	28.0	22
AM 1532 B2RF	1627	9	41.8	19	124	5	71	11	10.0	25	7.4	19	9.645	12	16821	23	28.0	21
PHX3701	1602	10	43.3	11	122	7	73	9	9.8	29	7.7	16	10.070	9	20797	1	35.5	1
PHY 375 WRF	1585	11	43.5	10	113	23	71	11	10.1	20	8.1	8	9.376	16	19226	6	31.6	7
PHY 370 WR, ck	1550	12	42.3	18	121	8	79	2	10.3	14	7.8	13	9.645	11	18290	12	29.6	13
AM 1504 B2RF	1548	13	40.9	26	102	37	71	11	10.7	6	7.6	17	10.150	7	18878	7	29.3	15
CG 3035 RF	1537	14	44.6	2	111	25	78	4	10.2	17	8.5	3	8.686	28	18829	8	30.7	10
DP 174 RF	1534	15	43.8	5	121	8	66	26	10.1	23	8.0	9	9.017	20	18595	11	30.8	8
PHY 315 RF	1530	16	43.6	8	111	27	71	11	10.1	22	8.0	10	9.056	18	19628	4	32.4	5
ST 4678 B2RF	1517	17	38.6	36	116	17	63	31	10.8	2	6.9	29	10.470	5	15225	35	23.6	37
AMX 511353 B2RF	1515	18	40.3	28	119	12	71	11	10.3	15	7.1	23	10.150	8	16743	24	27.1	25
ST 4596 B2RF	1506	19	40.5	27	109	30	63	31	10.6	8	7.4	20	9.010	21	15681	33	24.8	35
DP 121 RF	1503	20	43.1	14	119	13	76	6	9.9	27	7.7	14	8.899	23	16865	22	28.4	18
PHX3703	1500	21	43.7	7	111	25	78	4	9.7	33	7.7	15	8.493	33	18634	10	32.1	6
ST 4554 B2RF, ck	1484	22	41.7	21	107	34	70	19	9.8	28	7.2	22	8.874	26	16639	25	28.3	19
Dyna-Gro 2383 RF	1451	23	41.0	24	114	20	79	2	9.7	32	6.9	31	9.332	17	17883	14	30.8	9
PHX4762	1451	24	41.8	20	119	16	74	8	9.0	38	6.6	37	8.776	27	14999	36	27.8	23
DP 161 B2RF	1430	25	42.5	16	134	1	45	37	9.2	37	7.0	26	8.895	24	14481	37	26.1	29
AMX 110118 B2RF	1427	26	38.9	34	122	6	60	34	10.4	13	6.7	36	10.800	1	15866	31	25.8	31
AMX 511345 B2RF	1424	27	41.3	22	116	18	68	23	10.2	18	7.4	18	8.503	32	15900	30	25.9	30
FMX 4330 B2F	1396	28	44.2	4	104	36	71	11	10.4	12	8.4	4	7.346	38	20614	2	33.1	3
AMX 511370 B2RF	1382	29	40.0	30	120	11	68	23	10.2	16	7.0	25	9.579	14	15493	34	25.2	34
ST 6351 B2RF	1362	30	38.1	38	119	13	64	30	11.0	1	6.9	32	8.905	22	15827	32	24.0	36
FMX 4327 B2F	1358	31	41.2	23	99	38	65	28	9.6	36	6.9	33	8.457	34	16123	29	28.1	20
AM 1664 B2RF	1307	32	40.3	29	113	22	71	11	10.0	26	6.9	30	9.037	19	17492	16	29.1	16
ST 5458 B2RF	1296	33	38.4	37	110	29	70	19	10.7	7	6.9	34	8.663	29	17337	18	27.0	26
AM 1622 B2RF	1269	34	39.0	32	108	31	73	9	10.8	4	7.1	24	8.173	36	16544	26	25.7	32
PHX4727	1264	35	41.0	25	105	35	84	1	9.7	30	7.0	28	8.156	37	17185	19	29.4	14
FM 1880 B2F	1232	36	38.8	35	119	15	69	22	10.8	4	7.0	27	8.555	31	16540	27	25.6	33
FM 1735 LLB2	1193	37	38.9	33	111	28	75	7	10.4	11	6.8	35	8.264	35	16515	28	26.5	28
DP 141 B2RF	1177	38	39.5	31	125	4	44	38	9.6	34	6.5	38	8.885	25	13574	38	23.5	38
Mean	1489		41.7		115		68		10.1		7.5		9.252		17321		28.5	
LSD 0.10	165		1.5		14		12		0.7		0.5		1.479		1545		3.0	
C.V.%	9.4		2.1		10.6		15.0		4.2		3.6		9.5		5.3		6.1	
R-sq x 100	64.3		91.7		39.1		46.1		72.8		91.0		64.4		87.0		85.2	

Variety	Lint		Q		Fiber properties									
	yield	r	score	r	Mic	r	Len.	r	Unif.	r	Str.	r	Elo.	r
	lb/a						in.		%		g/tex		%	
DP 117 B2RF, ck	1763	1	51	35	5.0	1	1.13	29	84.2	25	29.5	11	8.6	31
PHX3702	1759	2	59	28	4.3	31	1.12	31	84.2	25	27.7	29	8.6	30
PHX3709	1729	3	62	21	4.7	11	1.13	23	85.7	2	28.9	20	9.1	19
Dyna-Gro 2570 B2RF	1706	4	69	7	5.0	1	1.17	4	86.3	1	30.3	4	9.7	11
ST 4498 B2RF	1689	5	66	11	4.5	17	1.14	18	85.0	6	31.0	2	10.6	2
AM 1550 B2RF	1662	6	44	38	4.6	14	1.11	34	83.5	38	25.6	38	8.9	24
Dyna-Gro 2400 RF	1659	7	59	27	4.7	11	1.13	23	84.6	16	29.3	16	9.9	6
CG 3220 B2RF	1631	8	62	21	4.8	5	1.14	17	84.9	8	29.0	18	9.9	5
AM 1532 B2RF	1627	9	68	9	4.5	17	1.15	11	84.9	8	27.1	33	9.5	12
PHX3701	1602	10	60	25	3.9	38	1.13	28	84.0	29	27.2	32	8.3	34
PHY 375 WRF	1585	11	57	31	4.5	21	1.12	31	84.4	19	27.7	28	9.0	23
PHY 370 WR, ck	1550	12	50	36	4.6	14	1.10	37	84.3	22	28.4	23	9.2	16
AM 1504 B2RF	1548	13	53	33	4.4	26	1.11	34	83.9	32	27.3	31	9.7	9
CG 3035 RF	1537	14	59	28	4.7	10	1.14	18	84.3	22	28.8	21	9.7	10
DP 174 RF	1534	15	66	14	4.5	21	1.15	13	84.5	17	26.6	37	9.0	22
PHY 315 RF	1530	16	55	32	4.4	23	1.11	33	83.9	31	28.0	27	8.7	27
ST 4678 B2RF	1517	17	61	24	4.8	7	1.13	23	85.0	6	29.6	10	9.2	15
AMX 511353 B2RF	1515	18	70	5	4.4	26	1.15	15	85.2	4	29.4	14	8.6	29
ST 4596 B2RF	1506	19	66	14	4.8	5	1.16	5	84.3	21	31.1	1	10.7	1
DP 121 RF	1503	20	61	23	4.8	7	1.14	18	84.8	14	29.7	9	9.4	13
PHX3703	1500	21	63	18	4.4	26	1.13	23	84.3	22	29.2	17	9.1	18
ST 4554 B2RF, ck	1484	22	65	17	4.5	17	1.14	18	84.9	8	30.6	3	10.6	3
Dyna-Gro 2383 RF	1451	23	52	34	4.2	34	1.10	37	83.9	32	28.1	26	8.2	35
PHX4762	1451	24	63	18	4.6	14	1.14	18	84.7	15	29.8	8	9.8	8
DP 161 B2RF	1430	25	62	20	5.0	1	1.16	5	84.5	18	29.4	14	8.4	32
AMX 110118 B2RF	1427	26	65	16	4.4	23	1.16	7	83.6	37	27.1	33	8.8	25
AMX 511345 B2RF	1424	27	48	37	5.0	1	1.11	34	84.9	8	28.6	22	8.6	28
FMX 4330 B2F	1396	28	60	26	4.4	26	1.13	29	83.8	34	28.2	25	7.8	37
AMX 511370 B2RF	1382	29	59	28	4.8	7	1.13	23	84.4	19	30.1	5	9.0	21
ST 6351 B2RF	1362	30	69	7	4.5	17	1.16	7	84.1	28	29.9	7	9.4	14
FMX 4327 B2F	1358	31	72	3	4.4	26	1.17	3	83.8	34	27.5	30	7.2	38
AM 1664 B2RF	1307	32	66	11	4.1	36	1.16	7	83.8	36	27.1	35	9.8	7
ST 5458 B2RF	1296	33	67	10	4.1	36	1.15	13	84.0	29	28.3	24	9.1	20
AM 1622 B2RF	1269	34	80	2	4.3	31	1.18	2	85.4	3	29.0	19	9.1	17
PHX4727	1264	35	70	4	4.2	35	1.15	11	84.9	8	30.0	6	10.1	4
FM 1880 B2F	1232	36	66	11	4.4	23	1.15	15	84.1	27	29.4	13	8.3	33
FM 1735 LLB2	1193	37	70	5	4.2	33	1.16	7	85.1	5	26.9	36	7.8	36
DP 141 B2RF	1177	38	85	1	4.7	11	1.21	1	84.8	13	29.5	11	8.7	26
Mean	1489		62		4.5		1.14		84.5		28.7		9.1	
LSD 0.10	165		16		0.4		0.03		ns		2.2		0.5	
C.V.%	9.4		14.8		5.0		1.8		1.0		4.6		3.0	
R-sq x 100	64.3		61.4		73.4		72.1		52.0		66.4		94.5	

Variety	Lint yield lb/a	r	Lint frac. %	r	Ht. cm	r	Open bolls %	r	Seed index g	r	Lint index g	r	Seed per a mil.	r	Fibers/ seed no.	r	Fiber den. no.	r
PHX4727	1427	1	37.9	25	.	.	68	22	10.3	27	6.5	31	9.765	1	13644	29	22.0	24
ST 4678 B2RF	1413	2	38.0	23	.	.	68	22	11.7	5	7.4	13	8.058	13	14546	19	20.7	32
AMX 511345 B2RF	1395	3	38.4	20	.	.	64	33	11.1	10	7.1	20	9.368	2	13741	27	20.7	33
DP 117 B2RF, ck	1365	4	42.1	3	.	.	71	6	10.3	28	7.6	6	7.700	20	15321	14	24.9	9
PHX3701	1354	5	41.5	5	.	.	70	10	10.5	23	7.7	4	8.244	11	15945	7	25.2	6
DP 174 RF	1345	6	43.2	2	.	.	69	18	10.1	32	7.9	2	8.387	8	16814	3	27.7	2
PHX4762	1302	7	40.4	11	.	.	73	3	10.2	31	7.1	18	7.740	17	14370	21	23.6	16
FM 1735 LLB2	1280	8	38.6	19	.	.	65	29	11.7	4	7.5	10	7.317	22	15878	8	22.6	19
PHX3702	1255	9	41.2	8	.	.	71	6	10.1	32	7.3	14	8.239	12	16609	4	27.4	3
PHX3709	1232	10	41.2	7	.	.	73	3	10.2	29	7.4	12	8.408	7	15738	9	25.7	5
PHY 315 RF	1218	11	43.3	1	.	.	71	6	9.8	36	7.7	5	7.723	18	17758	2	30.2	1
AMX 511353 B2RF	1215	12	37.6	27	.	.	68	22	10.6	19	6.6	27	8.998	3	13557	30	21.3	29
PHY 370 WR, ck	1203	13	39.7	13	.	.	71	6	10.7	16	7.2	15	7.946	15	15151	15	23.7	14
PHX3703	1173	14	40.2	12	.	.	69	18	11.0	11	7.6	7	7.176	23	16513	5	24.9	8
DP 121 RF	1163	15	39.7	14	.	.	65	29	9.9	35	6.7	23	8.342	9	14098	23	23.6	15
DP 141 B2RF	1160	16	39.6	15	.	.	51	38	9.7	37	6.6	26	8.311	10	13995	24	23.9	12
ST 4554 B2RF, ck	1148	17	36.7	31	.	.	69	18	11.1	9	6.6	25	8.872	4	13485	31	20.3	34
ST 6351 B2RF	1141	18	36.9	30	.	.	65	29	11.9	2	7.1	19	8.808	5	14975	16	21.0	30
ST 5458 B2RF	1138	19	36.7	32	.	.	66	26	11.2	6	6.8	22	7.838	16	14519	20	21.5	28
PHY 375 WRF	1135	20	41.0	9	.	.	70	10	10.6	21	7.6	9	6.615	31	15424	12	24.2	11
Dyna-Gro 2383 RF	1110	21	36.9	29	.	.	70	10	10.5	24	6.3	32	8.778	6	13983	25	22.3	21
Dyna-Gro 2400 RF	1101	22	41.3	6	.	.	70	10	10.7	15	7.7	3	6.129	33	16111	6	25.1	7
AM 1550 B2RF	1096	23	38.9	18	.	.	68	22	11.0	12	7.1	17	7.711	19	15334	13	23.3	17
FMX 4330 B2F	1045	24	42.0	4	.	.	65	29	11.8	3	8.7	1	5.682	35	18692	1	26.6	4
Dyna-Gro 2570 B2RF	1040	25	39.3	17	.	.	70	10	10.8	14	7.2	16	6.995	28	15427	11	23.9	13
ST 4498 B2RF	1020	26	38.0	24	.	.	70	10	10.0	34	6.3	33	7.080	26	13335	34	22.2	22
FMX 4327 B2F	1020	27	39.5	16	.	.	60	36	11.2	6	7.6	8	6.056	34	14843	17	22.0	23
AMX 511370 B2RF	1019	28	38.1	21	.	.	70	10	10.5	22	6.7	24	7.163	25	13647	28	21.6	26
AM 1664 B2RF	1002	29	36.1	33	.	.	74	2	10.2	30	5.9	37	7.517	21	13364	33	21.9	25
AM 1532 B2RF	1000	30	37.7	26	.	.	70	10	10.9	13	6.8	21	6.476	32	14108	22	21.5	27
ST 4596 B2RF	983	31	37.4	28	.	.	64	33	10.6	17	6.5	29	7.071	27	12850	37	20.1	35
CG 3220 B2RF	973	32	38.1	22	.	.	75	1	10.4	26	6.6	28	6.912	29	13914	26	22.4	20
CG 3035 RF	949	33	40.5	10	.	.	66	26	10.6	19	7.4	11	5.185	37	14811	18	23.3	18
AMX 110118 B2RF	871	34	35.7	35	.	.	66	26	10.4	25	6.0	36	6.769	30	13080	36	20.9	31
DP 161 B2RF	866	35	34.2	38	.	.	61	35	9.7	38	5.2	38	7.968	14	10742	38	18.4	37
AM 1504 B2RF	865	36	35.8	34	.	.	73	3	10.6	18	6.1	35	7.175	24	15436	10	24.3	10
AM 1622 B2RF	804	37	34.7	36	.	.	69	18	11.2	8	6.2	34	5.682	36	13436	32	20.0	36
FM 1880 B2F	585	38	34.5	37	.	.	54	37	12.0	1	6.5	30	4.236	38	13164	35	18.3	38
Mean	1116		38.8				68		10.7		7.0		7.485		14694		23.0	
LSD 0.10	171		1.9				6		0.8		0.7		1.592		1185		2.1	
C.V.%	13.0		2.8				7.6		4.7		5.9		12.6		4.8		5.4	
R-sq x 100	68.3		90.3				56.8		74.4		85.1		75.9		90.1		89.1	

Table 25. Fiber properties - 2007 1st-year Cotton Variety Test with irrigation on a Desha silt loam at Rohwer, Ark.														
Variety	Lint		Q		Fiber properties									
	yield	r	score	r	Mic	r	Len.	r	Unif.	r	Str.	r	Elo.	r
	lb/a						in.		%		g/tex		%	
PHX4727	1427	1	67	9	4.9	24	1.15	15	85.3	10	35.6	2	10.4	5
ST 4678 B2RF	1413	2	60	18	5.2	5	1.15	13	85.4	9	32.4	20	9.0	23
AMX 511345 B2RF	1395	3	54	25	5.3	1	1.14	21	85.2	11	32.7	17	9.4	15
DP 117 B2RF, ck	1365	4	50	30	5.3	2	1.14	23	83.8	34	31.2	28	8.6	28
PHX3701	1354	5	59	20	5.0	13	1.15	17	84.5	22	32.7	17	8.1	35
DP 174 RF	1345	6	69	7	4.8	27	1.17	6	84.5	23	30.4	34	9.4	18
PHX4762	1302	7	66	11	5.0	13	1.16	10	85.7	5	34.2	8	10.1	9
FM 1735 LLB2	1280	8	53	26	5.0	13	1.12	27	84.8	15	31.0	29	7.4	37
PHX3702	1255	9	66	11	4.6	36	1.15	17	84.4	28	31.9	22	8.6	31
PHX3709	1232	10	48	33	5.0	13	1.11	34	84.7	20	32.0	21	9.5	13
PHY 315 RF	1218	11	42	35	4.8	28	1.10	36	83.3	38	28.3	38	8.5	34
AMX 511353 B2RF	1215	12	71	6	4.9	25	1.16	8	86.1	2	32.8	15	9.0	21
PHY 370 WR, ck	1203	13	42	36	5.2	5	1.10	35	83.9	33	33.4	11	8.9	26
PHX3703	1173	14	56	22	4.9	25	1.13	25	84.5	23	31.0	29	9.0	21
DP 121 RF	1163	15	55	23	5.0	13	1.14	23	84.1	31	32.8	15	9.5	12
DP 141 B2RF	1160	16	81	2	4.7	32	1.20	1	84.8	17	34.1	9	8.6	30
ST 4554 B2RF, ck	1148	17	60	19	5.1	12	1.15	17	84.8	17	35.0	4	10.5	4
ST 6351 B2RF	1141	18	80	3	4.7	32	1.19	2	85.6	7	33.3	12	9.4	15
ST 5458 B2RF	1138	19	66	10	4.8	28	1.16	10	84.5	23	31.5	25	8.6	31
PHY 375 WRF	1135	20	63	14	5.0	13	1.15	15	85.4	8	31.6	24	8.6	31
Dyna-Gro 2383 RF	1110	21	64	13	4.7	32	1.14	21	85.1	13	31.7	23	8.7	27
Dyna-Gro 2400 RF	1101	22	49	31	5.1	8	1.11	32	84.9	14	34.6	5	10.8	2
AM 1550 B2RF	1096	23	39	37	5.1	8	1.09	37	83.8	35	28.5	37	9.0	23
FMX 4330 B2F	1045	24	78	4	4.7	32	1.18	5	85.7	5	31.3	27	8.1	36
Dyna-Gro 2570 B2RF	1040	25	55	24	4.9	23	1.13	25	84.3	29	33.0	14	10.6	3
ST 4498 B2RF	1020	26	52	28	5.0	13	1.12	29	84.6	21	35.2	3	10.2	7
FMX 4327 B2F	1020	27	58	21	5.3	2	1.16	8	84.1	32	30.7	33	7.1	38
AMX 511370 B2RF	1019	28	50	29	5.2	5	1.12	29	85.2	12	34.3	7	9.7	11
AM 1664 B2RF	1002	29	49	32	4.8	28	1.12	29	83.7	36	28.6	35	9.4	15
AM 1532 B2RF	1000	30	62	16	5.0	20	1.15	13	84.8	17	30.9	31	9.0	23
ST 4596 B2RF	983	31	68	8	5.1	8	1.17	6	85.7	4	36.3	1	10.2	8
CG 3220 B2RF	973	32	47	34	5.1	11	1.11	32	84.2	30	33.0	13	10.4	6
CG 3035 RF	949	33	53	27	5.2	4	1.12	27	85.9	3	34.0	10	10.9	1
AMX 110118 B2RF	871	34	62	17	4.8	28	1.15	17	84.4	27	30.8	32	9.2	19
DP 161 B2RF	866	35	63	14	5.0	20	1.16	10	84.5	23	31.3	26	9.1	20
AM 1504 B2RF	865	36	36	38	4.5	38	1.07	38	83.6	37	28.6	35	10.0	10
AM 1622 B2RF	804	37	86	1	4.5	37	1.19	2	86.5	1	32.7	19	9.4	14
FM 1880 B2F	585	38	72	5	5.0	20	1.18	4	84.8	15	34.4	6	8.6	28
Mean	1116		59		4.9		1.14		84.7		32.3		9.2	
LSD 0.10	171		15		0.3		0.03		1.2		2.2		0.6	
C.V.%	13.0		14.7		3.9		1.8		0.8		4.1		3.5	
R-sq x 100	68.3		78.6		73.4		80.5		67.2		82.0		93.6	

Table 26. Morphological and host plant resistance traits - 2007 Main Arkansas Cotton Variety Tests.

Variety	Lint yield lb/a	r	Leaf pubescence ¹ rating	r	Stem pubescence ¹ rating	r	Bract ² Trichomes no./cm	r	Tarnished plant bug damage ³ %	r
PHY 370 WR	1473	1	4.8	8	6.8	31	36	24	45	31
DP 454 BG/RR	1444	2	6.6	2	8.8	6	47	5	38	4
DP 515 BG/RR	1435	3	3.1	21	7.5	22	34	30	46	35
PHY 310 R	1418	4	4.4	13	6.9	30	39	17	48	37
FM 1600 LL	1415	5	1.4	36	5.9	36	24	37	47	36
ST 5242 BR	1408	6	3.8	16	6	35	33	32	40	13
DP 445 BG/RR	1396	8	2.6	23	6.9	29	25	36	38	5
PHY 485 WRF	1396	7	5.9	5	8.9	1	57	1	43	21
ST 5599 BR	1388	9	3.3	19	8.5	10	37	23	42	19
DP 117 B2RF	1385	10	6.6	1	8.8	3	53	2	43	26
PHY 425 RF	1384	11	6.3	3	8.8	3	43	9	40	9
DP 393	1378	12	2.3	25	8.9	1	40	15	40	11
ST 4664 RF	1372	13	5.9	5	6.1	34	40	13	35	1
DP 434 RR	1366	14	1.5	34	6.6	32	33	31	45	32
ST 4554 B2RF	1365	15	5.7	7	7.2	26	36	26	38	6
DP 147 RF	1360	16	4.8	8	7.1	27	42	12	46	34
DP 455 BG/RR	1358	17	1.3	37	7	28	33	33	43	22
PHY 480 WR	1334	18	6.1	4	8.8	6	45	7	43	25
DP 167 RF	1325	19	1.6	33	8	16	28	35	41	15
DP 164 B2RF	1323	20	1.8	27	7.3	24	31	34	40	8
ST 5283 RF	1316	21	3.9	14	5.8	37	38	19	35	3
ST 4357 B2RF	1314	22	1.8	28	8.4	13	39	16	45	30
CG 3520B2RF	1308	23	3.5	18	8.5	10	48	4	40	10
ST 4427 B2RF	1294	24	4.5	12	8.7	9	52	3	40	14
FM 958LL	1291	25	3.3	20	7.6	21	36	25	43	20
DG 2490 B2RF	1274	26	3.7	17	7.7	19	45	8	44	29
DG 2520 B2RF	1272	27	2	26	8.8	3	37	20	43	24
DG 2242 B2RF	1266	28	4.7	11	8.2	15	46	6	42	17
ST 5327 B2RF	1261	29	3.8	15	6.4	33	42	11	35	2
DP 143 B2RF	1255	30	4.7	10	8.3	14	42	10	42	18
FM 9068F	1252	31	1.5	35	7.6	20	35	29	40	12
DG 2100 B2RF	1243	32	1.8	29	8.8	6	39	18	39	7
FM 9060F	1234	33	2.4	24	7.9	18	36	27	43	23
CG 3020B2RF	1232	34	1.6	32	8.5	10	40	14	43	28
CG 4020B2RF	1227	35	2.8	22	8	16	37	22	46	33
FM 9063B2F	1175	36	1.7	30	7.3	25	36	28	43	27
FM 955B2LL	1170	37	1.7	31	7.4	23	37	21	42	16
TX-Maroon	837	38	.	.	5.8	38	.	.	74	38
Frego 1	.	.	.	.	.	.	.	.	86	40
Frego 2	.	.	.	.	.	.	.	.	83	39
Mean	1315		3.5		7.6		39		45	
LSD 0.10	87		1.1		0.8		6		6	
C.V.%	11.3		27.4		8.6		12.6		19.3	
R-sq x 100	78.9		81.4		78.0		74.0		66.7	

(pilose, very hairy).

2/ Marginal trichome density and length of bracts determined on 6 bracts/plot (4 reps) at Keiser irrigated test.

3/ Response to tarnished plant bug was determined by examining white flowers (6 flowers/plot/day for 9 days) for presence of another damage.

Table 27. Morphological and host plant resistance traits - 2007 1st-year Arkansas Cotton Variety Test.										
Variety	Lint yield lb/a	r	Leaf pubescence ¹ rating	r	Stem pubescence ¹ rating	r	Bract ² Trichomes no./cm	r	Tarnished plant bug damage ³ %	r
PHX3702	1535	1	3.9	21	8.5	7	34	26	47	36
DP 117 B2RF, ck	1514	2	4.8	12	8.0	14	35	24	74	38
PHX3709	1503	3	4.1	18	7.3	29	33	31	45	31
PHX3701	1496	4	4.5	14	8.3	11	39	12	40	12
DP 174 RF	1472	5	5.5	7	8.4	9	35	23	46	34
PHY 315 RF	1472	6	4.5	15	7.3	22	41	10	43	25
PHY 370 WR, ck	1470	7	4.1	18	7.1	32	34	26	35	2
AM 1550 B2RF	1454	8	1.1	36	6.7	35	22	38	42	17
Dyna-Gro 2570 B2RF	1443	9	1.1	36	7.3	25	27	36	46	35
PHX4762	1438	10	6.3	2	9.0	1	48	4	43	21
Dyna-Gro 2400 RF	1431	11	1.2	35	7.3	27	30	33	38	4
PHX3703	1408	13	4.0	20	6.8	34	36	22	48	37
PHY 375 WRF	1408	12	3.6	23	7.6	17	39	13	42	19
ST 4678 B2RF	1404	14	6.0	5	7.3	25	38	14	35	1
AMX 511345 B2RF	1375	15	6.6	1	8.1	12	54	1	44	29
CG 3220 B2RF	1372	16	1.8	27	7.4	20	28	34	43	22
CG 3035 RF	1365	17	1.1	36	7.2	30	24	37	38	5
ST 4554 B2RF, ck	1353	18	6.3	3	7.4	20	38	16	35	3
PHX4727	1352	19	5.5	7	8.9	3	42	9	40	9
AM 1532 B2RF	1351	20	2.4	25	8.3	10	38	15	40	10
ST 4596 B2RF	1349	21	5.4	10	8.1	12	37	20	38	6
DP 121 RF	1348	22	4.2	17	7.5	18	40	11	40	8
ST 4498 B2RF	1345	23	5.5	7	7.3	27	42	8	40	13
AMX 511353 B2RF	1340	24	6.0	6	8.4	8	43	6	40	11
AMX 511370 B2RF	1291	25	5.1	11	9.0	1	53	2	45	32
Dyna-Gro 2383 RF	1286	26	6.3	3	7.5	18	48	3	43	26
DP 161 B2RF	1271	27	3.9	22	8.9	3	33	29	42	18
ST 5458 B2RF	1264	28	2.2	26	6.3	37	38	17	45	30
ST 6351 B2RF	1245	29	1.6	28	5.8	38	35	25	40	14
DP 141 B2RF	1241	30	4.8	13	7.3	22	34	28	41	15
AM 1504 B2RF	1239	31	1.4	33	8.7	6	43	7	43	28
FM 1735 LLB2	1207	32	1.3	34	7.0	33	28	34	43	20
FMX 4330 B2F	1200	33	1.5	29	7.9	15	33	30	43	27
AMX 110118 B2RF	1183	34	1.5	29	7.2	31	32	32	43	24
AM 1664 B2RF	1176	35	4.4	16	8.8	5	43	5	39	7
AM 1622 B2RF	1173	36	3.2	24	7.9	16	37	19	46	33
FMX 4327 B2F	1150	37	1.5	29	6.4	36	37	18	43	23
FM 1880 B2F	986	38	1.5	32	7.3	22	36	21	42	16
Frego 1	.	.	.	.	.	.	.	.	86	40
Frego 2	.	.	.	.	.	.	.	.	83	39
Mean	1340		3.7		7.7		37.0		33	
LSD 0.10	80		1.0		0.8		7		6	
C.V.%	10.3		23.0		8.7		15.4		26.0	
R-sq x 100	78.1		86.5		70.8		66.6		68.0	
(pilose, very hairy).										
2/ Marginal trichome density and length of bracts determined on 6 bracts/plot (4 reps) at Keiser irrigated test.										
3/ Response to tarnished plant bug was determined by examining white flowers (6 flowers/plot/day for 9 days) for presence of another damage.										



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